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ABSTRACT

The training manual is designed to help the Naval trainee meet the occupational qualifications for advancement to Commissaryman First Class and Chief Commissaryman. The introductory chapter discusses advancement; subsequent chapters deal with the technical subject matter of the Commissaryman rating. Chapter 2 provides brief information about support/supply functions at various levels of Navy and Defense Department management; chapter 3 includes a discussion of regulations and instructions on which the operation of the general mess is based. Navy messes operate on a monetary ration allowance system, described in chapter 4; each phase of requisitioning and procuring food items is explained in chapter 5. Receipting, inspecting, and stowing of supplies is discussed in the sixth chapter. Sample menus are included in the seventh chapter to aid in menu planning and supervision of other menu planners. In chapter 8, the trainee learns to keep accurate daily expenditure records, and, in chapter 9, to understand the general mess accounting system. Landing party operations, sanitation, safety, and long range patrol rations are discussed in the concluding chapters. (AJ)

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COMMISSARYMAN 1 & C

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NAVAL TRAINING COMMAND

RATE TRAINING MANUAL NAVTRA 10280-F

PREFACE

This rate training manual was prepared by the Naval Training Publications Detachment, Washington, D.C., for the Naval Training Command. Technical assistance was furnished by the Naval Supply Systems Command; Navy Food Service Systems Office, Washington, D.C.; Naval Supply School, San Diego, California; and the Naval Examining Center, Great Lakes, Illinois.

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THE UNITED STATES NAVY

GUARDIAN OF OUR COUNTRY

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

WE SERVE WITH HONOR

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

THE FUTURE OF THE NAVY

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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CHAPTER 1

ADVANCEMENT

As this manual goes to press, the command title of the Navy Subsistence Office has been changed to Navy Food Service Systems Office (NAVFSSO). Wherever the Navy Subsistence Office is mentioned in this and subsequent chapters, the new title should be substituted.

This training manual is designed to help you meet the occupational qualifications for advancement to Commissaryman First Class and Chief Commissaryman. Chapters 2 through 13 of this course deal with the technical subject matter of the Commissaryman rating. The present chapter provides introductory information that will help you in working for advancement. It is strongly recommended that you study this chapter carefully before beginning intensive study of the chapters which follow.

REWARDS AND RESPONSIBILITIES

Advancement in rating brings both increased rewards and increased responsbilities. The time to start looking ahead and considering the rewards and the responsibilities of advancement is right now, while you are preparing for advancement to CS1 or CSC.

By this time, you are probably well aware of many of the advantages of advancement in rating—higher pay, greater prestige, more interesting and challenging work, and the satisfaction of getting ahead in your chosen career.

By this time, also, you have probably discovered that one of the most enduring rewards of advancement is the personal satisfaction you find in developing your skills and increasing your knowledge.

The Navy also benefits by your advancement. Highly trained personnel are essential to the functioning of the Navy. By each advancement in rating you increase your value to the Navy in two ways. First, you become more valuable as a person who can supervise, lead, and train others and thus make far reaching and long lasting contributions to the Navy.

In large measure, the extent of your contribution to the Navy depends upon your willingness and ability to accept increasing responsbilities as you advance in rating. When you assumed the duties of a CS3, you began to accept a certain amount of responsibility for the work of others. With each advancement in rating, you accept an increasing responsibility in military matters and in matters relating to the occupational requirements of the Commissaryman rating.

You will find that your responsibilities for military leadership are about the same as those of petty officers in other ratings, since every petty officer is a military person as well as a technical specialist. Your responsibilities for technical leadership are special to your rating and are directly related to the nature of your work. Operating the general mess is a job of vital importance, and it's a teamwork job; it requires a special kind of leadership ability that can only be developed by personnel who have a high degree of technical competence and a deep sense of personal responsibility.

Certain practical details that relate to your responsibilities for general mess administration, supervision, and training are discussed in chapter 3 of this training manual. At this point, let's consider some of the broader aspects of your

increasing responsibilities for military and technical leadership.

YOUR RESPONSIBILITIES WILL EXTEND BOTH UPWARD AND DOWNWARD. Both officers and enlisted personnel will expect you to translate the general orders given by officers into detailed, practical on-the-job language that can be understood and followed even by relatively inexperienced personnel. In dealing with your juniors, it is up to you to see that they perform their work properly. At the same time, you must be able to explain to officers any important needs or problems of the enlisted men.

YOU WILL HAVE REGULAR AND CONTINUING RESPONSIBILITIES FOR TRAINING. Even if you are lucky enough to have highly skilled and well trained Commissarymen, you will still find that training is necessary. For example, you will always be responsible for training lower rated men for advancement in rating. Also, some of your best workers may be transferred and inexperienced or poorly trained personnel may be assigned to you. Or a particular job may call for skills that none of your personnel have. These and similar problems require you to be a training specialist who can conduct formal and informal training programs to qualify personnel for advancement and who can train individuals and groups in the effective execution of assigned tasks.

YOU WILL HAVE INCREASING RESPONSIBILITIES FOR WORKING WITH OTHERS. As you advance to CS1 and then to CSC, you will find that many of your plans and decisions affect a large number of people, some of whom are not in the general mess and some of whom are not even in the supply department. It becomes increasingly important, therefore, to understand the duties and responsibilities of personnel in other ratings. Every petty officer in the Navy is a technical specialist in his own field. Learn as much as you can about the work of other ratings, and plan your own work so that it will fit in with the overall mission of the organization.

AS YOUR RESPONSIBILITIES INCREASE, YOUR ABILITY TO COMMUNICATE CLEARLY AND EFFECTIVELY MUST ALSO INCREASE. The basic requirement for effective communication is a knowledge of your own language. Use correct language in speaking and writing. Remember that the basic purpose of all communication is understanding. To lead, supervise, and train others, you must be able to speak and write in such a way that others can understand exactly what you mean.

A second requirement for effective communication in the Navy is a sound knowledge of the Navy way of saying things. Some Navy terms have been standardized for the purpose of ensuring efficient communication. When a situation calls for the use of standard Navy terminology, use it.

Still another requirement of effective communication is precision in the use of technical terms. A command of the technical language of the Commissaryman rating will enable you to receive and convey information accurately and to exchange ideas with others. A person who does not understand the precise meaning of terms used in connection with the work of his own rating is at a disadvantage when he tries to read official publications relating to his work. He is also at a great disadvantage when he takes the written examinations for advancement in rating. Although it is always important for you to use technical terms correctly, it is particularly important when you are dealing with lower rated men; sloppiness in the use of technical terms is likely to be very confusing to an inexperienced man.

YOU WILL HAVE INCREASED RESPONSIBILITIES FOR KEEPING UP WITH NEW DEVELOPMENTS. Practically everything in the Navy—policies, procedures, equipment, publications, systems—is subject to change and development. As a CS1, and even more as a CSC, you must keep yourself informed about all changes and new developments that might affect your rating or your work.

Some changes will be called directly to your attention, but others you will have to look for. Try to develop a special kind of alertness for new information. Keep up to date on available sources of technical information.

CUSTOMER RELATIONS

Yours is one of the ratings that places particular emphasis on customer service. This means

that your duties are directly and primarily concerned with rendering service to your shipmates. Let's consider that word "customer" for a moment. You are a customer when you line up on pay day or go to the disbursing office for information on your entitlements. You are a customer when you ask for information from the Personnelman in the ship's office and when you go to the sick bay or the dental office for treatment. You know how important it is to you on those occasions to receive good service.

There is probably no area of service more important to most of us than that which provides our three meals a day—no aspect of Navy life that can do more to make or break morale. Morale has always been a vital factor in the performance of any ship's company and in the decisions of individual men about making the Navy a career. As the military services move toward an all volunteer force, high morale is a necessity if the Navy is to attract and retain the highest quality of personnel.

Morale is affected not only by the quality of meals in the mess but also by the manner in which they are served. Many times on board ship, as the crew passes through the serving line you have observed a scene like this: CS3 Jones is carving a roast on the line and CSSN Smith is serving the mashed potatoes. BMSN Hauser comes through the line for his meal, and CS3 Jones gives him 3 ounces of meat when the exact portion is 4½ ounces per man. Seaman Hauser asks for a little more meat, and all of a sudden CS3 Jones snaps back in a rough voice, "What do you think this is, your mother's house? Come on, move the chow line." Hauser then passes on to CSSN Smith and the same thing happens with the potatoes. Seaman Hauser passes through the serving line mad and discontented with the cooks and the general mess as a whole. He is even thinking of ways to get back at Jones and Smith.

Customer service is what this is all about. Maybe CS3 Jones was instructed by his supervisor to give out 3 ounces of meat and CSSN Smith one scoop of mashed potatoes. Still the manner in which they answered BMSN Hauser was hardly customer oriented. Remember that when you are the customer you like to be treated courteously. Jones and Smith, before starting to serve should have asked their supervisor about the possibilities of larger portions. They then could have answered the "customer" in a polite and courteous way about the portions.

Courtesy is only one word, but a very big one, and a little common courtesy can go a long way. In customer service there is a golden rule which reads: "Provide the same service to your customers that you would like to receive as a customer."

ASSIGNMENTS

As you advance in the Commissaryman rating, you will be assigned to billets giving you greater responsibilities in the general mess. As a senior Commissaryman you are likely to be assigned as watch captain; you may prepare the menu plan; assist in the basic planning that precedes procurement of food; supervise stowage of food items; and assist with the records and reports of the mess. At the E-8 or E-9 level you might have supervision over the operation of a large general mess afloat or ashore.

Other types of duties include assignments in commissary stores or with a Navy Food Management Team.

Commissarymen who are qualified instructors may be assigned to instructor duty in a service school command. Other duty assignments include the Naval Examining Center, Great Lakes, where the service-wide advancement examinations are prepared and scored; the Training Publications Detachment, Washington, D.C. where rate training manuals are prepared; and various other highly specialized billets.

REQUIREMENTS FOR ADVANCEMENT

The topics covered in the remainder of this chapter will be at least partly familiar to you. They are covered here as a review and to bring you up to date on changes since you last studied for advancement. You will need this information not only for yourself but also to guide your men in their preparations for advancement.

To qualify for advancement, trainees must:

1. Have a certain amount of time in grade.
2. Complete the required military and occupational training manuals.
3. Demonstrate the ability to perform all the PRACTICAL requirements for advancement by completing the Record of Practical Factors, NAVPERS 1414/1.
4. Be recommended by the commanding officer.
5. Demonstrate your KNOWLEDGE by passing a written examination based on (a) the military requirements for advancement and (b) the occupational qualifications for advancement in the Commissaryman rating.

ADVANCEMENT SYSTEM

Advancement is not automatic. Meeting all the requirements makes you eligible for advancement but does not guarantee advancement. The number of men in each rate and rating is controlled on a Navy-wide basis. Therefore, the number of men who may be advanced is limited by the number of vacancies that exist. When the number of men passing the examination exceeds the number of vacancies the final multiple system is used to determine which men may be advanced and which may not.

Final Multiple

The final multiple combines three types of advancement systems:

Merit rating

Personnel testing

Longevity, or seniority

The system provides credit for performance, knowledge, and seniority, and, while it cannot guarantee that any one person will be advanced, it does guarantee that all men within a particular rating will have equal advancement opportunity.

The following factors are considered in computing the final multiple:

FACTOR	MAXIMUM CREDIT
Examination Score	80
Performance (Performance Evaluations)	50
Length of service – yrs x 1	20
Service in Pay Grade – yrs x 2	20
Medals and Awards	15
PNA	15
TOTAL	200

All of the above information (except the examination score and the PNA points) is submitted to the Naval Examining Center with the examination answer sheets. After grading, the examination scores, for those passing, are added to the other factors. A precedence list is prepared by the Examining Center for each pay grade within each rating. Advancement authorizations are then issued, beginning at the top of the list, for the numbers needed to fill existing vacancies.

PNA Points

A member who passes a Navywide advancement examination but whose advancement is not authorized because of quota limitations is awarded PNA(passed but not advanced) points on his final multiple the next time the multiple is computed. PNA points comprise two subfactors, Navywide examination score and performance mark standing. A member is awarded points according to his standing among all those who participated in his specific examination for

a given rate and a given cycle. The schedule for each subfactor, is as follows:

EXAMINATION	POINTS
70 through 80	1.5
60 through 69	1.0
Passing through 59	.5

PERFORMANCE MARK AVERAGE	POINTS
Top 25 Percent	1.5
Upper 25 to 50 Percent	1.0
Lower 50 to 25 Percent	.5
Bottom 25 Percent	.0

The points are added to the individual's final multiple by the Naval Examining Center and thereafter are creditable toward the candidate's most recent five of the last six Navywide advancement cycles. Accumulation of PNA points is, therefore, limited to 3 points per cycle and a total of 15 points. For more detailed information on PNA points, see BUPERSNOTE 1430, 31 March 1972.

KEEPING CURRENT ON ADVANCEMENT

Remember that the requirements for advancement may change from time to time. Check with your division officer or with your training officer to be sure you have the most recent requirements when you are preparing for advancement and when you are helping lower rated men to prepare.

To prepare for advancement, you need to be familiar with (1) the military requirements and the occupational qualifications given in the *Manual of Qualifications for Advancement*, NAVPERS 18068C (with changes); (2) The Record of Practical Factors, NAVPERS 1414/1; (3) appropriate rate training manuals; and (4) any other material that may be required or recommended in the current edition of *Bibliography for Advancement Study*, NAVTRA 10052. These materials are discussed later in the section of this chapter that deals with sources of information.

SOURCES OF INFORMATION

It is very important for you to have an extensive knowledge of the references to consult for detailed, authoritative, up-to-date information on all subjects related to the military requirements and to the occupational qualifications of the Commissaryman rating.

The official publications that prescribe the regulations and procedures governing the occupational duties of your rating are discussed in later chapters of this manual. Discussed below are additional publications that you should use for training purposes.

QUALS PUBLICATIONS

In training your men for their duties and helping them prepare for advancement, the publications in this section are basic references.

The Manual of Qualifications for Advancement, NAVPERS 18068C (with changes), gives the minimum requirements for advancement to each rate within each rating. The *Quals Manual* lists the military requirements which apply to all ratings and the occupational qualifications that are specific to each rating.

The *Quals Manual* is kept current by means of numbered changes. These changes are issued more frequently than most rate training manuals can be revised; therefore, the training manuals cannot always reflect the latest qualifications for advancement. When preparing for advancement, you should always check the LATEST *Quals Manual* and the LATEST change to be sure that you know the current requirements for advancement in your rating.

Remember these three things about quals:

1. The quals are the minimum requirements for advancement to each rate within each rating. If you study more than the required minimum,

you will of course have a great advantage when you take the written examination for advancement.

2. Each qual has a designated pay grade—E-4, E-5, E-6, E-7, E-8, or E-9. You are responsible for meeting all quals specified for advancement to the pay grade to which you are seeking advancement AND all quals specified for lower pay grades.

3. The written examinations for advancement to E-6 and above contain questions relating to the practical factors and the knowledge factors of BOTH military/leadership requirements and occupational qualifications. Personnel preparing for advancement to E-4 or E-5 must pass a separate military/leadership examination prior to participation in the Navy-wide occupational examination. The military/leadership examinations for the E-4 and E-5 levels are given according to a schedule prescribed by the commanding officer. Candidates are required to pass the applicable military/leadership examination only once.

Record of Practical Factors

A special form known as the Record of Practical Factors, NAVTRA 1414/1 (formerly NAVPERS 1414/1), is used to record the satisfactory completion of the practical factors, both military and occupational, listed in the *Quals Manual*. This form is available for each rating. Whenever a person demonstrates his ability to perform a practical factor, appropriate entries must be made in the DATE and INITIALS column. As CS1 or CSC, you will often be required to check the practical factor performance of your men and to report the results to your supervising officer. To facilitate record keeping, group records of practical factors are often maintained aboard ship. Entries from the group records must, of course, be transferred to each individual's Record of Practical Factors at appropriate intervals.

Extra space is allowed on the Record of Practical Factors for entering additional practical factors as they are published in changes to the *Quals Manual*. The Record of Practical Factors also provides space for recording demonstrated proficiency in skills which are within the general scope of the rating but which are not identified as minimum qualifications for advancement. Keep this in mind when you are training and supervising lower rated personnel. If a man demonstrates proficiency in some skill which is not listed in the Commissaryman quals but which falls within the general scope of the rating, report this fact to the supervising officer so that an appropriate entry can be made.

The Record of Practical Factors should be kept in each man's service record and should be forwarded with the service record to the next duty station. Each man should also keep a copy of the record for his own use. Tell your men about the necessity of the PFR for advancement. Instruct them to check periodically to see that it is up to date.

NAVTRA PUBLICATIONS

As a result of the establishment of the Naval Training Support Command under the Chief of Naval Training, new editions of training publications formerly designated with the abbreviation NAVPERS are being designated with NAVTRA. The numerals and the edition designators remain unchanged. This training manual, for instance, is NAVTRA 10280-F, which means that it is a publication of the Naval Training Support Command which succeeds a manual designated NAVPERS 10280-E.

In this chapter and elsewhere in this text, training publications which already carry the new abbreviation are so listed; those not yet changed are listed as NAVPERS numbers.

Training publications are of several types. The most numerous are the training manuals, correspondence courses, and curriculum materials, all of which are designed to provide instruction or guidance in learning a specific Navy subject. Other publications provide listings of courses and study materials and other general information of use to trainees, supervisors, and instructors.

Bibliography for Advancement Study

The Bibliography for Advancement Study, NAVTRA 10052 lists required and recommended rate training manuals and other reference material to be used by personnel preparing for advancement. The Bibliography is revised and issued once a year by the Naval Training Command. Be sure you have the latest edition.

Rate training manuals that are marked with an asterisk (*) in NAVTRA 10052 are MANDATORY at the indicated rate levels. A mandatory training manual may be completed by (1) passing the appropriate enlisted correspondence course based on the mandatory manual, (2) passing locally prepared tests based on the information given in the mandatory manual, or (3) in some cases, successfully completing an appropriate Navy school.

Remember all references whether mandatory or recommended, may be used as source material for the advancement examinations. Also, remind your men that they are responsible for all references at lower rate levels.

List of Training Manuals and Correspondence Courses

The List of Training Manuals and Correspondence Courses, NAVTRA 10061 contains lists of all training manuals published by the Navy, a description of the naval correspondence course program with lists of all correspondence courses available, and lists of leadership publications. The listings are both alphabetical and numerical, and there is a cross reference list of publication numbers to Navy stock numbers. The List is revised annually. It is the basic source of information as to what is available in the various subject areas and the publication date and edition designator of the current edition of each publication.

Rate Training Manuals

Rate training manuals are written for the speicfic purpose of helping personnel prepare for their duties and for advancement. Some courses are general in nature and are intended for use by more than one rating; others (such as this one) are specific to the particular rating.

Each time a rate training manual is revised, it is brought into conformance with the official publications and directives on which it is based; but during the life of any edition, discrepancies between the manual and the official sources are almost sure to arise because of changes to the latter which are issued in the interim. In the performance of your duties, you should always refer to the appropriate official publication or directive. If the official source is listed in NAVTRA 10052 and therefore is a source used by the Naval Examining Center in preparing the advancement examinations, the Examining Center will resolve any discrepancy of material by using the most recent.

Military Requirements Manuals.—There are three rate training manuals that are prepared to present information on the military requirements for advancement. They are:

Basic Military Requirements, NAVPERS 10052 (current edition).

Military Requirements for Petty Officer 3&2, NAVPERS 10056 (current edition).

Military Requirements for Petty Officer 1&C, NAVPERS 10057 (current edition).

Each of the military requirements manuals is mandatory at the indicated rate levels. In addition to giving information on the military requirements, these three books give a good deal of useful information on the enlisted rating structure; how to prepare for advancement, how to supervise, train, and lead other men; and how to meet your increasing responsibilities as you advance.

Customer Service Manual.—The Commissaryman rating is one of several for which the *Navy Customer Service Manual*, NAVPERS 10119 is mandatory. Use this publication in training sessions to introduce discussions of the attitudes and behaviors that characterize excellent customer service.

NAVSUP Publications

A number of publications issued by the Naval Supply System Command will be of interest to you. While you do not need to know everything that is given in the publications mentioned here, you should have a general idea of where to find information in NAVSUP publications.

Food Service Management, NAVSUP P-486 contains regulations governing the procurement, storage, issue, and disposition of food items.

The *Manual* is kept up to date by means of monthly changes. All copies of the *Manual* should have all changes made in them as soon as possible after the changes are received.

The *Food Service Operations*, NAVSUP Publication 421, provides guidance in the operation of a general mess and is to be used for management, menu planning, food preparation and service, food storage, equipment maintenance, and controlling sanitation and safety. In addition, it is designed for use in training Food Service personnel.

Other Publications

Navy Food Service is a periodical of the Navy Subsistence Office listing suggested menus to be used as a guide in the planning and preparation of menus. NSO distributes this publication bimonthly to all ships and shore stations having general messes. It includes useful information on commodities, small equipment for galley use, manual changes, sanitation, and hints on food preparation.

Chapter 1, Food Sanitation, *Manual of Preventive Medicine*, NAVMED P-5010-1 provides guidance for all personnel who are concerned with sanitation in food service.

TRAINING FILMS

Training films available to naval personnel are a valuable source of supplementary information on many technical subjects. Training films are listed in the *United States Navy Film Catalog*, NAVAIR 10-1-777, published 1 July 1971. Copies may be ordered in accordance with the *Navy Stock List of Forms and Publications*, NAVSUP 2002. Supplements to the Film Catalog are distributed to catalog holders.

When selecting a film, note its date of issue listed in the Film Catalog. A film which is obsolete only in part may sometimes be shown effectively if before or during its showing you carefully point out to trainees the procedures that have changed. For this reason if you are showing a film to train other personnel, take a look at it in advance so that you may spot material that may have become obsolete and verify current procedures by looking them up in the appropriate sources before the formal showing.

CHAPTER 2

THE SUPPLY DEPARTMENT

As a Commissaryman First Class or a Chief Commissaryman aboard ship or ashore, you are stepping up into a supervisory position in one of the largest supply systems in the world. You must know many things about the way that system works.

You should be familiar with the operations performed by a supply department afloat or ashore. As a member of a supply department, you are a part of a team, and a team can only function well through the combined efforts of its individual members. As you advance in rating, you must know more and more about the way the other members of your team function in order to do your best in cooperating with them.

Also it is not too early to think ahead to the time when you may hope to qualify for a Supply Corps commission so you should begin now to learn all you can about the Navy Supply System.

This chapter provides brief information about support/supply functions at various levels of Navy and Department of Defense management so that you can see the linkage between your immediate duty station, other Navy segments, and the Department of Defense.

It will help you find answers to questions such as:

What is the relationship between the Defense Supply Agency and the Navy Supply Agency?

What does the Defense Supply Agency do to help procure food items for the general mess?

What is an inventory control point?

What organizations (Navy or Defense) does any ship use for requisitioning food items?

What is the relationship between the general mess and the private messes aboard ship?

DEFENSE SUPPLY AGENCY

The Defense Supply Agency inventory control points were established for the purpose of providing centralized management of specified commodities for the entire Department of Defense.

Under the general direction of the Defense Supply Agency, DOD Inventory Control Points known as Defense Supply Centers have been established to perform functions comparable to those of Navy Inventory Control Points (which are described later in this chapter).

The Defense Supply Agency has the responsibility to:

1. Eliminate duplication and overlapping of effort between and among the military departments.
2. Improve the effectiveness and economy of supply service operations throughout the Department of Defense.

Listed below are Inventory Control Points (ICP) under the management control of DSA:

Defense Personnel Support Center
Defense Construction Supply Center
Defense General Supply Center
Defense Industrial Supply Center
Defense Fuel Supply Center
Defense Electronics Supply Center

Because the Defense Personnel Support Center directly affects the duties of your rating, its functions and its relation to the Navy are described below. The other Defense Supply Centers have similar responsibilities and relationships in providing the materials assigned to their cognizance.

DEFENSE PERSONNEL SUPPORT CENTER

The Defense Personnel Support Center has the mission of procuring and distributing wholesale stocks of food, clothing, and medical supplies to the U. S. military service worldwide and to other authorized requisitioners of the Federal Government. It serves as the National Inventory Control Point for all assigned items. Because it directly affects the duties of your rating, the procurement and distribution of food is discussed in the following paragraphs.

DPSC operates separate distribution systems for perishable and semiperishable food items to provide the best response to requests from supply points. Requisitions for semiperishable foods are submitted to the Supply Operations Control Center, Philadelphia, shipment being made from strategically located depots. Requisitions for perishable foods are submitted to regional offices of DPSC. The Navy assumes supply management for items once they have been received from DPSC installations by Navy activities (U.S. or overseas shore stations or units of the Fleet).

The Navy is responsible for local purchase of items authorized by the Center. These are items for which there are small or sporadic requirements, items which are high-use perishables such as bread, milk, and ice cream, and items for resale. Navy activities are encouraged to use the purchase services of DPSC Regional Headquarters to procure these items when such services are available and when their use is practical. The Navy also retains mess management responsibility, including menu planning and food service.

In summary, DPSC is responsible for:

- Coordinating and determining wholesale subsistence requirements to support the military services.
- Procuring (both the policy connected with it and the action).
- Managing WHOLESALE stocks.
- Cataloging (Federal Supply Catalog Groups 89).
- Standard pricing.

Each military department (Army, Navy, Marine Corps, Coast Guard, and Air Force) is responsible for:

- Determining food items required.
- Calculating its own requirements.
- Managing its own RETAIL stocks.
- Initiating research and development.
- Technical and management control of general messes (food service).
- Training.

NAVY SUPPLY SYSTEM

Think for a moment of the wide variety of supplies, repair parts, and equipment needed aboard a Navy ship or shore station. Besides such items as subsistence and clothing, needed directly by the ship's company, there are machinery repair parts, ammunition, fuel, aviation supplies, electronic gear, and others. To handle all these in an orderly fashion for the entire Navy, a system of centralized control has been established.

The Secretary of the Navy has delegated authority to the Chief of Naval Material to develop and promulgate the Department-wide policies governing the supply, distribution, and disposal of naval material.

NAVAL SUPPLY SYSTEMS COMMAND

The Commander, Naval Supply Systems Command is assigned the following supply management responsibilities by the Chief of Naval Material.

1. Providing supply management policies and methods (technical guidance) for Navy material to activities of the Navy and Marine Corps, including: provisioning, cataloging, inventory management, distribution, materials handling, traffic management, transportation, packaging, preservation, receipt, storage, issue, and disposal functions. In the performance of the above responsibility as it pertains to naval material, the Commander, Naval Supply Systems Command utilizes the material management experience and capabilities of the other Systems Commands,

derived from the accomplishment of their assigned material support responsibilities.

2. Providing staff assistance to the Assistant Secretary of the Navy (Installations and Logistics) in matters relating to supply, distribution, and disposal of naval material; and, in collaboration with the Commandant of the Marine Corps, providing departmental coordination action in the preparation of departmental directives and positions on such matters having common application to both Navy and Marine Corps material.

3. Administering:

- The Naval Supply System.
- The Navy Publications and Printing Program.
- The Navy Resale Program.
- The Navy Ration Law. (Navy Food Service Programs).
- The Navy Stock Fund.
- Field Purchasing conducted pursuant to authority delegated by the Commander of the Naval Supply Systems Command.
- Supply, budgetary, fiscal, and statistical functions in support of assigned military assistance/international logistics programs.
- A centralized program to control the utilization of Navy storage facilities.

4. Performing appropriate material support functions with respect to:

- Materials handling equipment not otherwise assigned.
- Special clothing not otherwise assigned.
- Food.
- Naval material for which such responsibility is not otherwise assigned.

5. Performing supply management functions with respect to items of naval material which are assigned to the Naval Supply Systems Command for that purpose.

6. The maintenance of official stores accounts for Navy material in store entrusted to the custody of an accountable officer.

7. The management, funding, and control, worldwide, of the transportation of Navy property and the authorization and administration of the transportation and storage of property of naval and civilian personnel, consistent with responsibilities assigned to the Single Manager agencies for transportation.

8. The research and development efforts associated with the functions, methods, equipments, and materials assigned.

9. Providing technical guidance with respect to preparation and service of food in general messes except at naval hospitals, and providing assistance in the planning and layout of supply spaces ashore and afloat.

10. The data processing applications for supply management within the Naval Material Command.

The Naval Supply Systems Command has cognizance of the procurement of materials and services throughout the Department of the Navy for which no other procuring activity, office, or command is otherwise delegated procurement authority. In the discharge of this responsibility, the Commander of the Naval Supply Systems Command may delegate appropriate procurement authority to personnel, both within and without his command, whom he designates as contracting officers. Such authority is exercised in accordance with limitations, and requirements prescribed by the Commander of the Naval Supply Systems Command and applicable regulations. Subject to such limitations and requirements as may be prescribed by him or by higher authority, the Commander of the Naval Supply Systems Command may also authorize the heads of activities under his command to redelegate their procurement authority, or a portion thereof, to responsible personnel within their respective activities whom they designate as contracting officers.

Within the limits of its capabilities, the Naval Supply Systems Command procures materials and services for other Navy procuring activities when requested to do so, as provided for by the Naval Material Command. The Naval Supply Systems Command is responsible for conducting the formalities of procurement by formal advertising for other Navy procuring activities to the extent provided in applicable regulations.

In addition to providing other technical guidance and assistance as appropriate in connection with the responsibilities set forth above, the Commander Naval Supply Systems Command is the Navy's supply manager. He is responsible for

developing and supervising the Navy Supply System, which combines the supply and distribution systems that function on the basis of centralized control of item assets into ONE OVERALL SYSTEM.

The basis of the supply system is first the division of all materials into categories and then the assignment of Navy-wide responsibility for each category to specific activities.

The system works on three levels: (1) the systems command level; (2) the inventory control point level; and (3) the field activity level. Where the inventory control point functions are performed by DSCs directly under the Department of Defense, there is an additional level which is known as the Navy Retail Office. For subsistence, the systems command level technical controls are exercised by the Navy Supply Systems Command; the inventory control point is the Defense Personnel Support Center in Philadelphia; the Navy Fleet Material Support Office, Mechanicsburg, is the Retail Office; field activities are various supply centers, depots, and supply departments.

SYSTEMS COMMAND RESPONSIBILITIES

Systems commands exercise two kinds of control over materials. The Naval Supply Systems Command has administrative control over most kinds of materials; in other words, it makes policy for and exercises general supervision over those items discussed earlier in this chapter.

Many materials come under the TECHNICAL CONTROL of some other systems command. For example, a ship's engines and engine repair parts come under NAVSHIPSYSCOM and its weapons under NAVORDSYSCOM. This means that for the materials under its control each of these commands is responsible for such matters as research, development, design, installation, and other purely technical aspects.

Certain categories of materials, are assigned to NAVSUP for technical control as well as administrative control. Subsistence, the material with which you as a Commissaryman are most directly concerned, is in this group. Research on food items, and other technical functions connected with the subsistence of naval personnel, are performed by NAVSUP supported activities.

INVENTORY CONTROL POINTS

The heart of the integrated supply system is the inventory control point. Each category of material has an inventory control point (ICP) which has been assigned responsibility for procurement and distribution of that category of stock for the entire Navy. For some categories of material, the inventory control point is a DSC assigned responsibility for procurement and distribution of that category of stock for the Army, Air Force, Coast Guard, and Marine Corps as well as the Navy.

An ICP is not a warehouse; it does not carry a selection of stock. It procures the stock and has it delivered to supply depots and other field supply activities and redirects supply between activities. Reports of stock status are submitted by the field activities to the ICP where the information is used in estimating future stock requirements.

In most cases two systems commands work hand in hand with the inventory control points, the command that has technical control and Naval Supply Systems Command.

ICPs operating under the Department of Defense rather than the Navy are under the management control of the Defense Supply Agency, but receive guidance in Navy technical and supply matters from Navy commands even though they are not directly supervised by these commands.

The Navy Fleet Material Support Office is not an inventory control point in the full sense of the word. It is properly known as a Navy Retail Office charged with the responsibility for ensuring that the Department of Defense ICPs properly support Navy requirements and for performing certain important functions which could not be transferred out of the Navy. The Electronics Supply Office is both an inventory control point and retail office.

NAVY SUBSISTENCE OFFICE

The Navy Subsistence Office is under the command and support of the Naval Supply Systems Command. Its mission is to administer the Navy's Food Service Program which includes exercising technical direction and financial control over Navy general messes in order to ensure a high quality ration for Navy enlisted personnel within the limits prescribed by law. In accomplishment of this mission, the Commanding Officer of the Navy Subsistence Office is an agent of and is responsible to the Commander, Naval Supply Systems Command. Orders and instructions issued by him for this purpose have the same force and effect as though issued by the Commander, Naval Supply Systems Command.

NAVY FLEET MATERIAL SUPPORT OFFICE

The Navy Fleet Material Support Office (FMSO) exercises retail management over food items assigned cognizance symbol 9M. The mission of FMSO, as it relates to subsistence, is to monitor, coordinate, and review the performance of the Navy Supply System in support of Navy requirements; in coordination with the Defense Supply Agency, ensure responsive support to the Navy Supply System by the Defense Personnel Support Center; and exercise retail supply management of Navy owned stocks of subsistence material.

Functional tasks of the Navy Fleet Material Support Office as they relate to subsistence are:

- Exercise inventory management and distribution control of subsistence material under the cognizance of FMSO, and serve as central screening and implementing agency for DSA and Navy directives and instructions on subsistence operations, including the preparation of NAVSUP publication changes, instructions and notices, and their review and revision, as appropriate.
- Determine Navy subsistence requirements under the Navy Stock Fund and justify the funding requirement to the Naval Supply Systems Command. Serve as project manager in the administration of the Navy Stock Fund allocations received for financing the procurement of subsistence stocks.
- Maintain liaison with DSA and DPSC on matters pertaining to subsistence supply support.
- Develop and recommend to the Naval Supply Systems Command the Navy activities designated to stock subsistence, subsistence stockage objectives, and the Navy subsistence distribution support pattern, and develop and coordinate supply support agreements with the military services and other Government agencies requiring subsistence support.
- Develop, maintain, and provide to the DPSC, the Navy General Mobilization Material and Prepositioned War Reserve Requirements data for perishable and semiperishable food items as directed by Department of Defense instructions. Develop, maintain, and provide the DPSC with Navy Peacetime Operating Requirements for Navy peculiar perishable and semiperishable food items.
- Obtain food items inventory and stock status reports from Navy activities when required for use in determining system requirements and system support capability, and maintain a continuous stock purification and rotation program.
- Maintain and furnish program and related supply intelligence data to the Defense Personnel Support Center and to Navy subsistence stock points for use in requirements planning, and prepare and maintain the Navy subsistence mobilization plan and other planning documents required in support of the Navy planning system.
- Observe field operations resulting from the implementation of DSA and Navy directives pertaining to subsistence supply support in order to measure efficiency and to determine conformance with current policies and procedures.

DISTRIBUTION

So far the discussion has been concerned with those activities which control and direct the flow of material. Obviously, any supply system must also include facilities for physically handling material if it is to flow as directed from

commercial plants to the operating forces of the fleet. These facilities comprise the fourth level of supply.

The subsistence supply system is composed of two major types of field supply activities. These are DSA and Navy managed activities.

ACTIVITIES UNDER DEFENSE SUPPLY AGENCY

Activities under the management of the Defense Supply Agency follow:

- Defense Supply Depots–Stock semiperishable food items for issue to all services. They are strategically located so that each depot can serve a geographical area. The depots receive requisitions for supply action from the Supply Operations Control Center, Philadelphia, Pennsylvania, and ship material to the requisitioners.
- DPSC Regional Headquarters–Receive requisitions for perishable food items from the requiring activity. The material may be shipped from stock or procured for shipment by the vendor.

MAJOR NAVY SUPPLY ACTIVITIES

There are two major types of Navy supply activities: supply centers and supply depots. Standard organization and functions of supply centers and supply depots may be found in NAVSUP P-485.

Supply Centers

Major activities of the Navy, established to furnish supply support to fleet and shore establishment activities. They receive, store, issue, pack, ship, and make disposition of material. Material to be stocked at centers for issue to customers is determined by ICPs. Customers, aboard ship or at shore stations, send requisitions to the center. The centers ship the material, bill the customers for payment, and inform the ICP of the action. The ICP keeps track of the center's inventory of the item and buys or directs shipment of additional material to the center so that it will be available when customers request it. If material is not available when customers request it and none is scheduled to arrive in time to meet customer need date, purchase action is initiated or the request is forwarded to the ICP which initiates purchase action or directs another stock point to make the issue to the customer. Usually centers are authorized to purchase and manage limited supplies of easy-to-buy retail stocks. This ensures more rapid action in meeting customer needs if an item is not in stock when the customer's request is received. In some instances supply centers carry as many as 800,000 different items. Primary support is rendered to naval supply centers by the Naval Supply Systems Command.

Supply Depots

Supply depots are under the command of fleet commanders and are all located outside the United States. Generally, they perform the same functions as supply centers, but on a somewhat limited basis, in providing material support to the fleet and overseas shore stations.

SUPPLY DEPARTMENTS AFLOAT

The organization of a supply department afloat is determined by the size and type of the ship and by the number and qualifications of the officers and enlisted personnel assigned to the supply department. The organization chart of a typical supply department of a ship with Supply Corps officers is shown in figure 2-1. Figure 2-2 shows the chart for a ship without Supply Corps officers.

Smaller ships, such as destroyers, often have only one Supply Corps officer attached to the ship. In this case, all personnel of the supply department are combined into one division–the S Division. On other ships, there may be no Supply Corps officers at all. When this is true, there is still a supply department, but it has a line officer acting as the supply officer. On large ships, the supply department may be divided into several divisions–the S1, the S2, and the

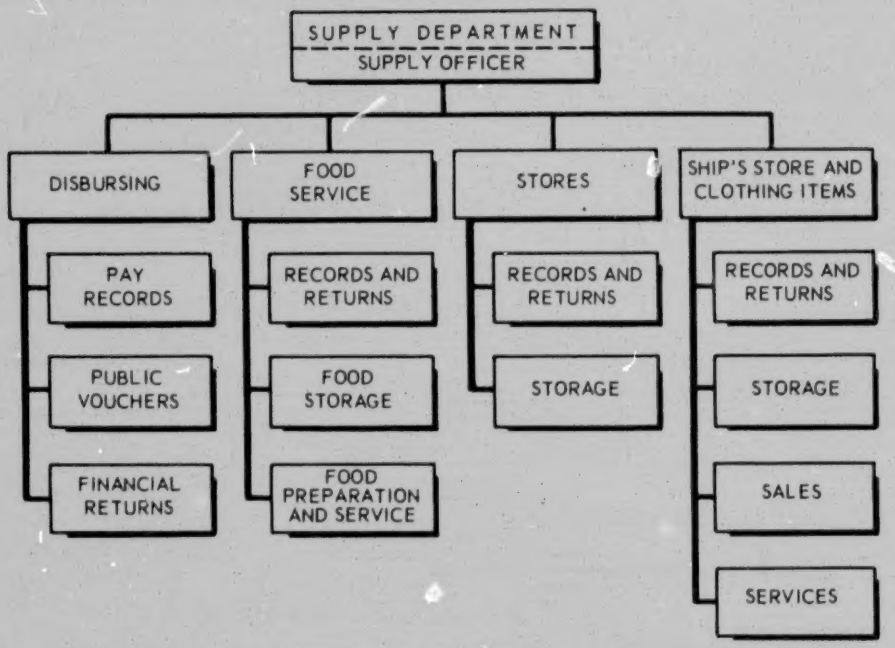

Figure 2-1.–Typical supply department of a ship with supply corps officer.

S3, for example–with Commissarymen in one division and other ratings in the others.

DISBURSING SECTION

The disbursing section of the supply department collects and disburses all public funds aboard ship and performs all afloat pay and allowances functions.

Funds are deposited with the disbursing officer for food items bought from the general mess.

STORES SECTION

The stores section procures, receives, stores, and issues general stores, equipage, and repair parts. It prepares correspondence, reports, and returns; and it maintains records on these functions.

You will work closely with members of the general stores section. In large replenishment operations, you will probably work side by side with Storekeepers. So far as storage is concerned, both Commissarymen and Storekeepers must have the same kinds of knowledge. In many supply operations, the senior Commissaryman must work closely with the senior Storekeeper.

SHIP'S STORE SECTION

The ship's store section is the retail and service activity of the supply department.

In addition to the ship's store, any or all of the following activities may be included in this section:

- Fountain
- Tailor shop
- Cobbler shop
- Barbershop
- Laundry
- Dry-cleaning shop
- Vending machines
- Watch repair shop
- Photographic shop

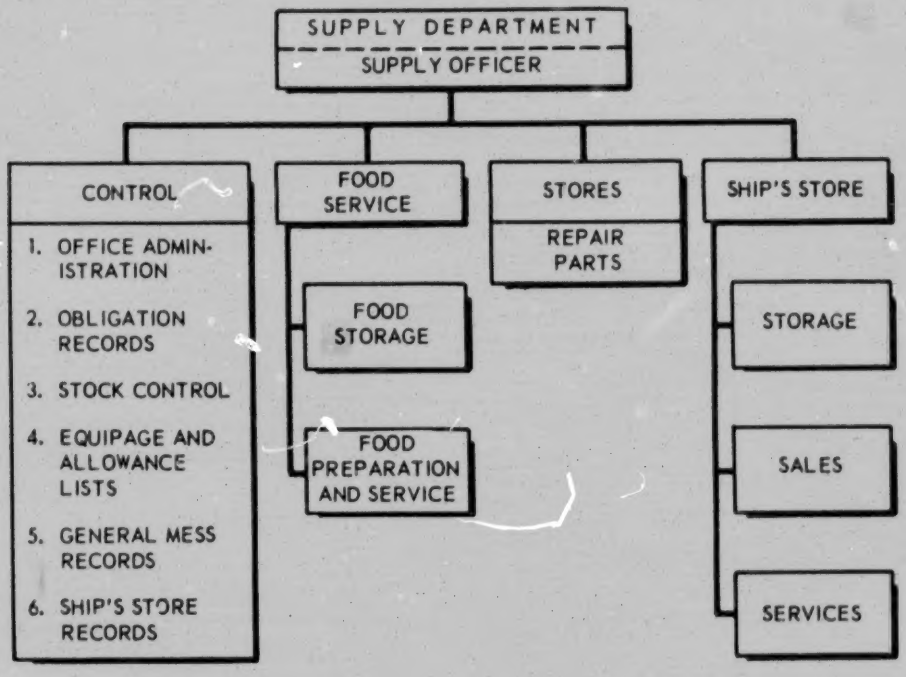

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Figure 2-2.—Typical supply department of a ship without supply corps officer.

The section procures, receives, stores, issues, and sells clothing and ship's store stock and operating supplies. It operates ship's store resale and service activities and the clothing store. It maintains all related records and prepares required reports, returns, and correspondence.

All transactions involving clothing items (sales, transfers, receipts, etc.) are made at a standard Navy-wide price. Other items sold through retail outlets carry a markup over cost to produce profit, most of which goes to the ship's recreation fund. The maximum profit that may be realized on retail sales is 15%.

FOOD SERVICE SECTION

The food service section of the supply department operates all phases of the general mess, including jurisdiction and control of messmen and the messhall master at arms. It also makes authorized issues, sales, and transfers of food items. The records and returns functions include stock replenishment for food items; conducting inventories; preparing correspondence, reports, and returns; and maintaining records incident thereto.

SUPPLY DEPARTMENT ASHORE HAVING GENERAL MESS FUNCTIONS

There are many kinds of supply department organizations ashore that have a food service division when authorized by the Naval Supply Systems Command.

FUNCTIONS

The functions of a supply department ashore are similar to those of a supply department afloat. However, the scope of supply functions is much broader since shore stations provide supply support on a far vaster scale than that on board one small ship. These functions are standardized throughout shore stations and are described in detail in Chapter 1 of *Afloat Supply Procedures*, NAVSUP P-485.

ORGANIZATION

A typical small supply department ashore is organized as shown in figure 2-3. It may vary somewhat at an overseas shore station depending on the mission of the station. The food service division is organized in the same manner as aboard ship.

PRIVATE MESSES

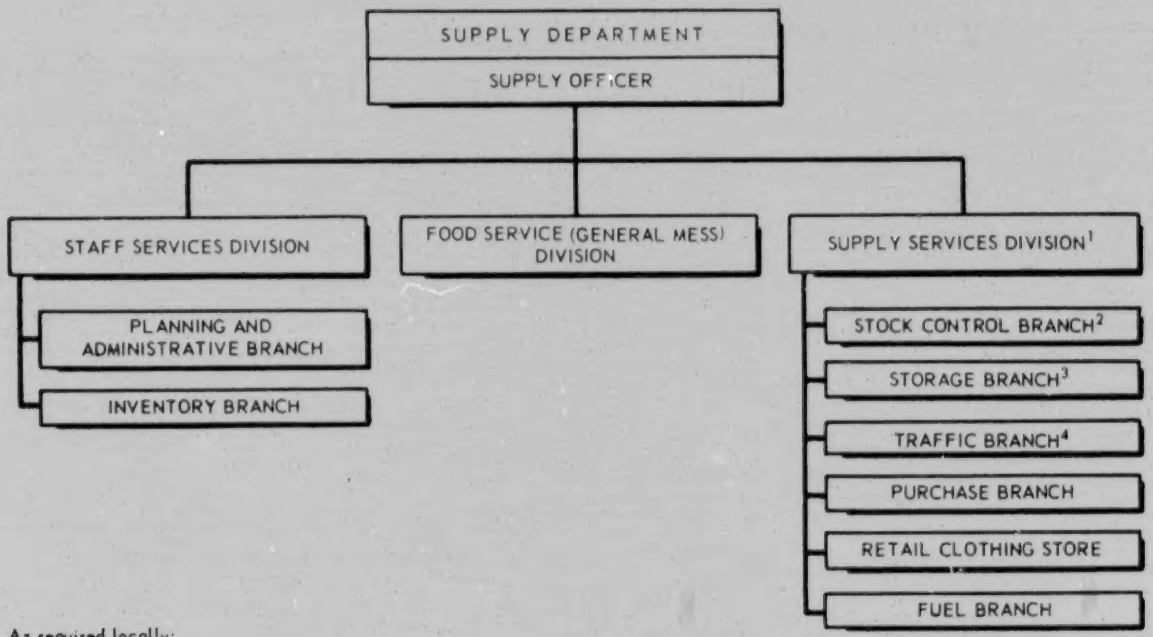
Afloat, the food service division makes sales of food items to the following types of private messes: flag mess, cabin mess, wardroom mess, warrant officers' mess, and chief petty officers' mess.

Whereas the costs necessary for the operation of the general mess are defrayed from appropriated funds, the food items for private messes are paid for by the members. Furthermore, the supply officer is not responsible for their administration.

In matters of administration and organization, there is little relationship between the general mess and the private mess. In practice, however, particularly afloat, the general and private messes work closely together. Private messes may purchase items of subsistence from the general mess and are governed by supply department regulations for the drawing and the storage of food items.

You will find a flag mess aboard only when a flag officer is regularly attached to a ship and he elects to set up his own mess and operate it with personnel assigned to his staff. On some ships, the captain of the ship forms his own mess, and this is called the cabin mess.

Some wardroom messes are divided physically into two messes–for instance, one might be for junior officers–and the other for senior officers. Seniority is by no means the only criterion for physically dividing the messes. Such messes, however, are separate in location only. For operating purposes, they are considered one mess.



As required locally:
[1]Volume of workload may require individual control and material divisions.
[2]Includes issue control, disposal (less salvage and scrap), technical, and receipt control (naval material) functions.
[3]Includes shop stores and salvage and scrap functions.
[4]Includes receipt control (purchase material) functions.

10.8

Figure 2-3.–Typical organization for a small supply and fiscal department ashore.

For the sake of economy in crew and galley space, it is necessary in some cases to combine the wardroom and warrant officers' messes.

When there is a chief petty officers' mess aboard ship, it is run just like the officers' messes, with separate space and food service.

MESS OFFICERS

The mess officers consist of a mess president, a mess treasurer, and a mess caterer. Often the same person will act as both mess treasurer and mess caterer.

For example, in the wardroom mess, the senior line officer of the mess, in command or in succession to command, is the mess president. The mess treasurer is appointed by the C.O. in an indefinite period. All members of the mess are eligible to be elected except officers who are charged with custody or disbursement of public funds. No one attached to the mess is permitted to incur indebtedness in the name of the mess without the written approval of the mess treasurer.

The commanding officer appoints the mess caterer except in those cases where the mess treasurer performs the functions of both treasurer and caterer. The mess caterer is responsible for the operation of the mess.

SALES TO PRIVATE MESSES

The details of sales to private messes are discussed later in this book in terms of those items authorized for sale to private messes, the forms to be used, and the prices to be charged. You must keep in mind the requirements of private messes when you requisition subsistence for the general mess.

CHAPTER 3

ADMINISTRATION OF THE GENERAL MESS

One of your most important duties in the general mess will be to assist the food service officer in mess administration. Chapter 2 of *Commissaryman 3&2*, NAVPERS 10279 (latest edition), tells you of the officer and enlisted responsibilities in administering the general mess. This chapter discusses certain regulations and instructions upon which the operation of the general mess is based. Security, supervision and training, work instructions, conservation, and minimum instructions for battle messing are also covered.

REGULATIONS AND INSTRUCTIONS

The operation of the general mess is based on directives, laws, regulations, and instructions. Some of these, like the ration law, were passed by the Congress of the United States and apply to all the services. Others are Navywide. Some are local instructions. As a First Class or Chief Commissaryman, you must be familiar with these regulations. It is your job to see that they are enforced.

STATUTORY INSTRUCTIONS

The Department of Defense (DOD) Directive 1338.9 of 25 April 1967 establishes uniform policies and procedures governing the food allowance for enlisted members of the military services and is in consonance with the Navy Ration Law (Title 10, U.S. Code 6082). The monetary value of the basic daily food allowance is developed from the Standard DOD Food Cost Index which contains a representative list of specific quantities of food items derived from the Navy Ration Law and the current Department of Defense Appropriation Act.

Besides the laws on rations, chapter 145, Title 10, U.S. Code (Public Law 436, 82 Congress 1952) and DOD Directive 5160.11 authorized the publication of a Federal Supply Catalog for subsistence. The items contained in this catalogue are those classified in FSC Group 89 (except class 8965) for which activities in the DOD have recorded requirements.

REGULATORY INSTRUCTIONS

Regulatory instructions which refer to the general mess include *U.S. Navy Regulations*, the *Navy Supply Systems Command Manual*, and the *Navy Comptroller Manual*, as well as Navy Subsistence Office Instructions.

Navy Regulations states "all enlisted men other than those who are members of the chief petty officers' mess, or are on commuted rations, shall mess in the general mess."

You will have little occasion to refer to the *NavCompt Manual*, since the regulations included in it cover the financial business of the mess, the allotment on which it operates, and the payment of bills. These are the concern of the supply officer or (when there is no supply officer aboard) the commanding officer and the officer to whom he delegates this function. As a senior Commissaryman you will not pay the bills.

NAVSUP Manual, on the other hand, is your guide. You should be thoroughly familiar with NAVSUP Pub. 486, Food Service Management.

You should also be thoroughly familiar with "Food Sanitation," Chapter 1 of the *Manual of*

Naval Preventive Medicine, NAVMED P-5010-1. As a supervisor of general mess functions, you must be certain that the regulations in this publication on sanitation, storage, and the preservation and refrigeration of food items are scrupulously observed.

Besides these publications, you should have access to current NAVSUBSOFCINSTS. These will usually supplement or elaborate on laws or regulations concerning the general mess, as well as special conditions pertaining to them.

LOCAL INSTRUCTIONS AND REGULATIONS

Each ship has a supply department organization manual, prepared by the supply officer. It covers the following subjects:

- General organization.
- Functions of the department and divisions thereof.
- Normal personnel allowance of the department and divisions.
- Responsibilities of key personnel.
- Functions of duty supply officer, duty Storekeeper, division duty petty officers, and galley watch captains.
- Flow of authority within the department.
- Distribution of the organization manual.

The supply officer also prepares supply department instructions for personnel of the department. Copies of instructions prescribing sanitary regulations, safety precautions, and equipment operation instructions are posted in conspicuous places where they may readily be seen by concerned personnel. Generally it should not be necessary to duplicate detailed *NAVSUP Manual* procedures in the form of supply department instructions.

It is mandatory that instructions be prepared on the following subjects:

- Safety precautions and operating instructions for equipment operated by supply department personnel.
- Safety precautions and stowage precedures for semisafe and dangerous materials.
- Safety precautions for food preparation, including the prohibition of the use of steel wood for cleaning food-handling equipment.
- Sanitary regulations for the general mess and related spaces and ship's store service activities. (These regulations may be combined with instructions covering safety precautions and equipment operating instructions.)
- Hours of operation for ship's store and related service activities.
- Regulations for the procurement, stowage, custody, inventory, and sale of tax-free cigarettes.
- Maintenance of a refrigerator log for entering temperature readings twice daily and at other times when considered necessary. (This instruction provides for reporting of temperature irregularities to the supply officer.)

Supply department instructions prescribing safety precautions and operating instructions for equipment, safety precautions for food preparation, and sanitary regulations do not need to be prepared when plastic laminated placards incorporating the requirements of the cognizant bureaus are posted instead.

The originals of the food service instructions are kept in the supply office files. As a First Class or Chief Commissaryman, you will be required to read these and sign your name on an attached ruled sheet to signify that you have read and understood them. You will be furnished copies of the instructions pertaining to your job.

SECURITY

Physical security in the supply department is concerned with security of classified publications and correspondence, safekeeping of funds and other specified items in the supply officer's safe, and custody and safekeeping of keys to supply spaces.

Senior Commissarymen are often called to stand supply duty officer watches. Therefore, you should familiarize yourself with key

security as it pertains to supply department spaces.

FILES, RECORDS AND PUBLICATIONS

Your supply officer assures the commanding officer that office records and publications are safeguarded from loss or destruction. Such records and publications are taken out of the supply office only when absolutely necessary, and then, only by supply department personnel.

You may on occasion have to handle or use correspondence or publications with security classifications. When you do, handle them in accordance with the *Department of the Navy Security Manual for Classified Information*, OPNAVINST 5510.1 (series). Current shipboard security instructions may contain additional requirements for handling classified matter.

KEY SECURITY

Afloat Supply Procedures, NAVSUP P-485, describes current security information.

The basic rules set down by the NAVSUP P-485 for key security are:

- Supply spaces must be kept locked when not in use.
- Custody and responsibility for any space must rest with the man in charge of that space.
- Keys to supply space padlocks must not be taken from the ship but must be turned in to the key locker when the custodian goes ashore. Keys to general mess working spaces may be passed between watch captains and not locked in the key locker.
- Whenever an original or duplicate key is lost, a new lock must be placed in use.
- Combinations to locks must not be recorded in writing except that a written combination in a sealed opaque envelope, signed over the flap by both the custodian and the accountable officer in the presence of each other, is retained in the accountable officer's safe.
- All key padlocks must be of 1-1/2-inch size.
- All keyless padlocks must be three combination manipulation resistant type.

Aboard submarines, because of unique space limitations and the necessity for stowing material in widely separated small spaces, it is not feasible to keep all supply spaces locked. Fleet, type, and local instructions make necessary provisions for appropriate deviations.

Train your personnel to lock the padlock on the staple and remove the key whenever they enter a storeroom or other locked supply department space. This procedure prevents keys from being locked in the storeroom, locks from being lost or switched by unauthorized personnel, and men from being locked in the space by passers-by who may think the space has been inadvertently left unlocked.

Key and locks are grouped into four categories according to the spaces they safeguard. These categories are briefly described as follows:

Group I (General Supply)

The group I designation applies primarily to spaces containing such material as general stores and repair parts stowed in the custody of the supply officer aboard ships with central storerooms.

It does apply, however, to a limited extent aboard ships without central storerooms when repair parts are so stowed in the custody of the supply officer.

Each lock is passed by an original and duplicate kep different from the keys to any other space. The original should be in the possession of the man in charge of the space during working hours, after which it should be turned over to the duty petty officer to be placed in a general key locker in the supply offi The duplicate key should be kept in the supply office key locker, in a special duplicate key locker, or in the supply officer's safe. A master key, original, which will pass all locks in group I may be retained in the custody of the duty petty officer designated by the supply officer. A duplicate master key should be in the custody of the supply officer.

Group II (Food Service)

Group II consists of general mess spaces, including the galley, bakeshop, bread room, meat preparation room, vegetable preparation room, subsistence issueroom, refrigerator spaces, and subsistence storerooms. Each lock is passed by an original and duplicate key different from the key to any other space. These keys should be handled as in the case of group I except that the keys to the galley, bakeshop, bread room, meat preparation room, and vegetable preparation room should not be turned in to the key locker but should be passed between watch captains as they relieve each other. A master key, original only, should pass all locks in group II and should be different from the master key to group I. The master key to group II may be retained in the custody of the officer or petty officer designated by the supply officer. If a duplicate master key is furnished, it is retained in the custody of the supply officer.

Group III (Ship's Store)

Group III spaces consist of the ship's store, including bulk storerooms, retail stores, and all related facilities except service activities.

Keyless padlocks, stock number 9Z-6340-285-6524, must be used to secure all group III spaces. Each keyless padlock is provided with a "setting-in" key and instructions for setting the combination. The custodian of the space must:

1. Set a combination in the lock.
2. Record the combination on a piece of paper.
3. Place the paper and the "setting-in" key in an opaque letter size envelope.
4. Seal the envelope.
5. Sign his name over the flap of the envelope in the presence of the accountable officer.
6. Turn the envelope over to the accountable officer.

The custodian must not record the combination anywhere other than on the paper turned in to the accountable officer, nor will he disclose the combination to any person. The accountable officer receives the sealed envelope, signs his name over the flap in the presence of the custodian and retains the sealed envelope in his safe. If emergency entry is necessary, the accountable officer may remove the combination from the envelope and enter the space with at least two witnesses. In an immediate emergency, such as fire, damage control nippers or burners may be used to cut the lock. If the custodian is absent when emergency entry is made, the space must be secured by replacing the lock or car seal in the presence of the two persons witnessing the entry. When the custodian returns, he must change the lock combination and may, if he desires, conduct an inventory.

Group IV (Service Activities)

Group IV consists of ship's service activities, including the barbershop, tailor shop, cobbler shop, and laundry. (However, if cash sales or other cash transactions are made through these service activities, or if material intended for ultimate cash sale is stored in them, they must be treated as group III spaces for key security purpose.)

Each lock is passed by an original key different from the keys to any other space. The original must be in the possession of the man in charge of the space during working hours, after which it will be turned over to the duty petty officer to be placed in a general key locker in the supply office. The duplicate keys are kept in the supply office key locker, in a special duplicate key locker, or in the supply officer's safe. A master key, original, which will pass all locks in group IV may be retained in the custody of the supply officer or his designated assistant. The duplicate master key must be in the custody of the supply officer.

Master Keys

A GRAND MASTER key that fits all locks to groups I, II, and IV must be kept in the custody of the supply officer. Also, the supply officer has control over separate master keys for each of groups I, II, and IV spaces, because locks for these spaces are issued in separate master sets.

No master or grand master key must fit the lock on the alcohol locker.

The supply officer can authorize the passing of the duplicate key between duty supply officers or duty petty officers when the number of supply officers is such that the senior petty officers are required to act as department duty officers.

See figure 3-1 for a general picture of the custody and handling of keys, master keys, and locks in the supply department.

Spare Locks

Padlocks in master series come in sets of 10, 20, 40, and so forth. A set of sufficient quantity should be ordered to provide a surplus of ten percent spare locks when installing or replacing a master set series. The surplus spare locks will be in the custody of the supply officer and will be issued to replace those locks having lost or broken keys or those locks which fail to function properly.

Key Locker

The general key locker in the supply office is for the stowage and security of all keys to groups I, II, and IV spaces. The original key to this locker is in the possession of the supply officer. In supply department instructions the supply officer specifically provides for passing the duplicate key to the key locker between supply department duty petty officers.

Alcohol Locker

Alcohol in the supply storerooms must be kept in a chest or locker with the only key in the possession of the supply officer or a designated assistant supply officer. No master key must pass this lock. If an officer assistant is authorized to retain custody of the key to the alcohol locker, such delegation of responsibility must be made in writing by the commanding officer.

SUPERVISION AND TRAINING

Efficient operation of the general mess stems from good supervision and training.

It will be your responsibility as a senior Commissaryman to make certain that your men know what is expected of them in quantity and quality production. The competent supervisor recognizes this responsibility, helps each man understand the importance of his position in the general mess organization, sees to it that he is trained to perform his job properly, and then supervises to keep performance up to standard.

TRAINING YOUR MEN

Before you make any man responsible for a task, be sure that he knows how to perform it correctly. If you fail in this responsibility and leave a man with a job for which he is untrained, the fault is yours for any mistakes he may make. Training takes time and patience but it pays off, and failure to train can be costly. So see that either you yourself, or one of your experienced men teaches each man to perform any job that is new to him.

Rotate your Commissarymen. Learn the capabilities of newly assigned men and plan for the training and experience they will need to meet the requirements of the food service operation. Menus have to be planned according to the skills and capacities of the galley crew. Inexperienced Commissarymen cannot handle a multiple choice menu efficiently. Constant supervision keeps the senior Commissaryman aware of the help his subordinates need to make them more proficient on their jobs. You need to be alert to the need for the adjustments you must make in the galley routine to effect a smooth operation and to use to advantage the capabilities of your galley crew.

There is a standard pattern that you can use in most training situations. It consists of the following four steps:

1. Perform the task yourself, explaining what you are doing at each stage.
2. Perform the task again, with the trainee (or trainees) telling you at each stage what to do next.

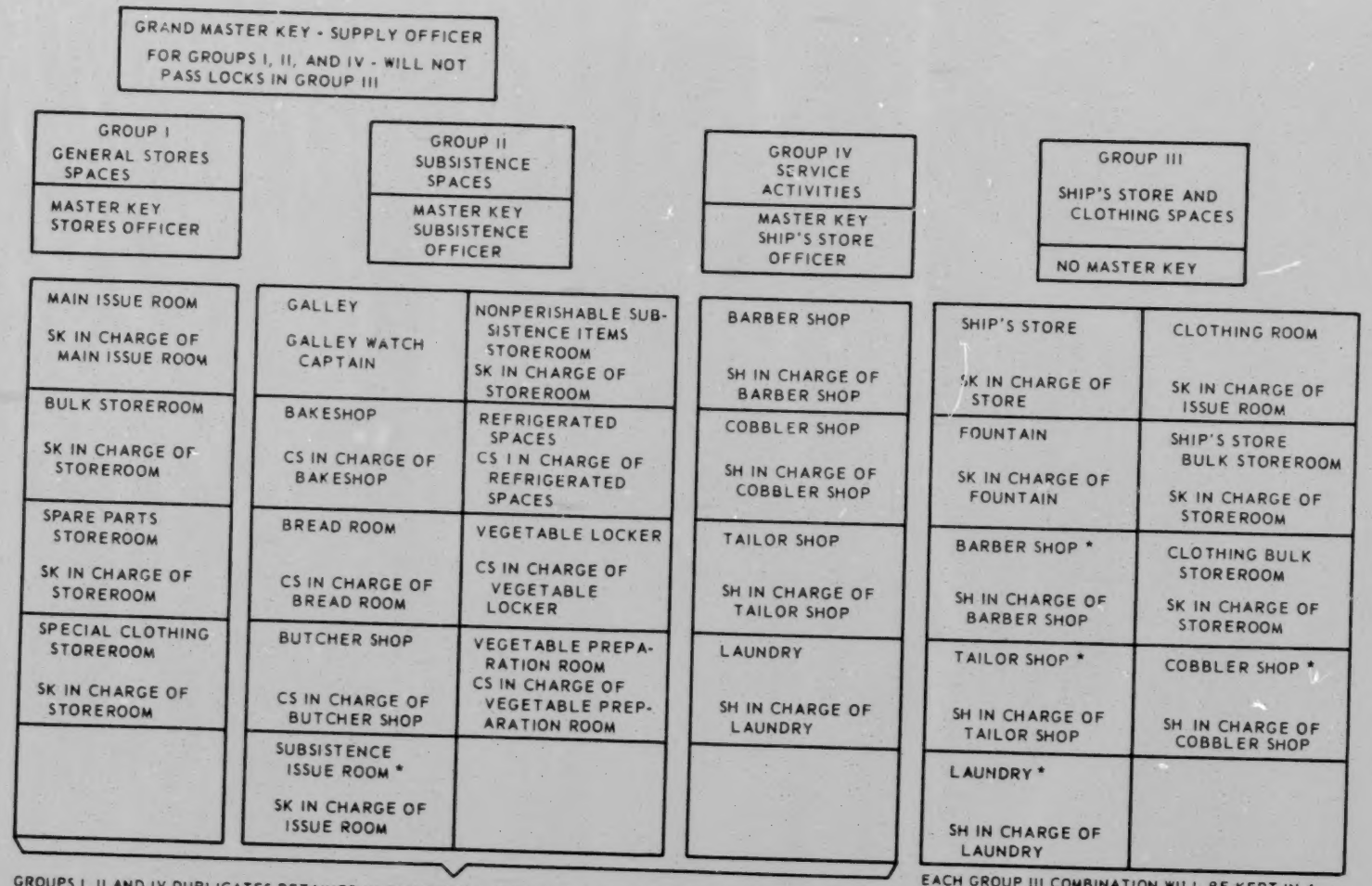

GRAND MASTER KEY - SUPPLY OFFICER
FOR GROUPS I, II, AND IV - WILL NOT PASS LOCKS IN GROUP III
GROUP I
GENERAL STORES SPACES
MASTER KEY STORES OFFICER
MAIN ISSUE ROOM
SK IN CHARGE OF MAIN ISSUE ROOM
BULK STOREROOM
SK IN CHARGE OF STOREROOM
SPARE PARTS STOREROOM
SK IN CHARGE OF STOREROOM
SPECIAL CLOTHING STOREROOM
SK IN CHARGE OF STOREROOM
GROUP II
SUBSISTENCE SPACES
MASTER KEY SUBSISTENCE OFFICER
GALLEY
GALLEY WATCH CAPTAIN
BAKESHOP
CS IN CHARGE OF BAKESHOP
BREAD ROOM
CS IN CHARGE OF BREAD ROOM
BUTCHER SHOP
CS IN CHARGE OF BUTCHER SHOP
SUBSISTENCE ISSUE ROOM *
SK IN CHARGE OF ISSUE ROOM
NONPERISHABLE SUBSISTENCE ITEMS STOREROOM
SK IN CHARGE OF STOREROOM
REFRIGERATED SPACES
CS IN CHARGE OF REFRIGERATED SPACES
VEGETABLE LOCKER
CS IN CHARGE OF VEGETABLE LOCKER
VEGETABLE PREPARATION ROOM
CS IN CHARGE OF VEGETABLE PREPARATION ROOM
GROUP IV
SERVICE ACTIVITIES
MASTER KEY SHIP'S STORE OFFICER
BARBER SHOP
SH IN CHARGE OF BARBER SHOP
COBBLER SHOP
SH IN CHARGE OF COBBLER SHOP
TAILOR SHOP
SH IN CHARGE OF TAILOR SHOP
LAUNDRY
SH IN CHARGE OF LAUNDRY
GROUP III
SHIP'S STORE AND CLOTHING SPACES
NO MASTER KEY
SHIP'S STORE
SK IN CHARGE OF STORE
FOUNTAIN
SK IN CHARGE OF FOUNTAIN
BARBER SHOP *
SH IN CHARGE OF BARBER SHOP
TAILOR SHOP *
SH IN CHARGE OF TAILOR SHOP
LAUNDRY *
SH IN CHARGE OF LAUNDRY
CLOTHING ROOM
SK IN CHARGE OF ISSUE ROOM
SHIP'S STORE BULK STOREROOM
SK IN CHARGE OF STOREROOM
CLOTHING BULK STOREROOM
SK IN CHARGE OF STOREROOM
COBBLER SHOP *
SH IN CHARGE OF COBBLER SHOP
GROUPS I, II AND IV DUPLICATES RETAINED IN THE SUPPLY OFFICE KEY LOCKER, SPECIAL DUPLICATE KEY LOCKER, OR IN THE SUPPLY OFFICER'S SAFE
EACH GROUP III COMBINATION WILL BE KEPT IN A SEALED AND SIGNED ENVELOPE IN THE ACCOUNTABLE OFFICER'S SAFE
*GROUP III LOCKS REQUIRED ONLY WHEN CASH SALES OR OTHER CASH TRANSACTIONS ARE MADE THROUGH THESE SPACES
NOTE: FOR DETAILED INFORMATION REGARDING SECURITY OF KEYS AND COMBINATIONS TO LOCKS, REFER TO THE SECTION UNDER SECURITY OF THIS CHAPTER.

Figure 3-1.—Key security.

43.1

3. Have each trainee perform the task, reciting what he is doing at each stage. You should supervise closely to stop him if he makes an error.

4. Have the trainee continue performing the task under general supervision until he is familiar with it.

When you have had a chance to observe a man sufficiently to know that he has learned one set of duties thoroughly, it is time to think of teaching him something else. Some men will be content with doing the same job, and sometimes, you may feel that to let a man alone in a job he can do well is the most efficient way to get the work done. Usually, however, this is a short-sighted policy. It fails to provide for necessary absences or periodic increases in workload when you may need extra hands who have had some experience. Also, it does nothing about stimulating a man to improve and advance. Some men will be naturally eager to learn new skills, and it is part of your job to help them learn as much and advance as rapidly as possible. You have a duty also toward the more passive types. Many of them, with encouragement from you, will exert themselves and accomplish much more than they or you may originally have thought possible.

Additional information on training responsibilities and procedures is given in the training course, *Military Requirements for Petty Officer 1 & C.*

SUPERVISING

Navy general messes operate according to detailed written regulations and instructions. Commissarymen and strikers must learn the most basic of these regulations and must know where to look up appropriate instructions for all the general mess procedures. But the matter does not end there. With you as a supervisor rests the responsibility for seeing that the regulations are observed. Human nature being what it is, men will attempt to take short cuts, become careless, or for other reasons disregard regulations unless they know that the supervisor is concerned with compliance. By your own example and by observing and inspecting their work, you can and must impress your men with the importance of obeying the rules. Complaince usually is easier to obtain if men understand the reason for a rule or a procedure, so this should be a part of their training, but don't neglect to follow up on the training by checking performance. If any of the following occur you will know that your supervision has been too lax: (1) overissues; (2) improper preparation of food; (3) improper service of food; or (4) an excessive amount of waste.

Good supervision requires that you know what is going on in the general mess spaces at all times. Learn to work at one thing and, at the same time, keep an eye and ear out for what your men are doing. It may seem hard at first, but it is essential.

With men whose abilities and methods of work you know well, you actually can dismiss thought of a piece of work once it is assigned, but you cannot do this with all men. A good supervisor knows which men can be relied upon to proceed on their own, and which ones need closer supervision and direction.

Conscientious supervision will enable you to prevent your men from forming bad work habits and teach them good habits instead.

Just the fact that you are paying attention to what they do has a salutary effect on the atmosphere of the galley. The good supervisor does get around and is seen before the meal hour, during the meal hour, and after the meal hour. He follows through the on-the-job training with on-the-job supervision.

Be Careful How You Supervise

It's a curious thing that, while most of us like to feel that our seniors know what is going on, we strongly resent the sense that someone is watching our every move. We especially resent being watched if we think the watcher is constantly looking for something to complain about.

One mistake commonly made by mediocre supervisors is to do a great deal of observing but apply very little thought to what is observed. A successful supervisor often gets more out of a brief, casual visit than another would from

standing around an hour watching the men at work. This is because the good supervisor makes a practice of knowing as much as possible about each man, and when he is near him he really concentrates on what the man is doing and how he is doing it. He usually adopts a casual manner to spare the man embarrassment, but there is nothing casual or careless about the supervision he is exercising.

EVALUATION AND CRITICISM

Establish a clear concept in your mind of what you expect of each man. How must output can you reasonably expect of him? What quality of performance is necessary for the job? In most general mess operations quality is very important, and by quality we mean preparation and service of food so that it is highly palatable, consistent observance of sanitary precautions, careful compliance with regulations, and clear and complete records.

Although quality comes first, if meals are to be prepared on time and the other work of the mess completed properly, men must learn to work with reasonable speed. What do you know about each man's personality and work habits that will enable you to help him do the best job he can? If his performance is below standard, consider why this is so, and what can be done to improve it. Observe his work; analyze any complaints or claims that relate to this work to determine the cause.

Don't offer adverse criticism so continually that the men expect trouble whenever you are around. This type of supervision creates hostility and stirs up such an atmosphere of nervous apprehension that it actually causes mistakes which otherwise would not have occurred. People do their best work when they feel the supervisor trusts and respects them and that he is present mainly to give them help and needed direction.

Of course supervisors must criticize what their personnel do, but there are different ways of criticizing. Before you offer adverse criticism, always make sure that you have the whole picture. It never hurts to ask a few questions before you comment. The answers may change the nature of your remarks considerably. Again it is a good idea to keep the situation as casual as possible and avoid an attitude of accusation unless you are certain that you have reason to accuse.

Avoid, if possible, the type of criticism which merely condemns. Even if you see one of your men doing something entirely wrong, your purpose is not merely to stop him, but at the same time to start him doing the thing right. So, instead of saying, "Don't do that!" tell or show him how to do it correctly. Remember, too, to practice, whenever possible, the adage! Reprimand in private, praise in public.

Most Commissarymen mean to do their jobs well. If you start with this assumption, you will find that you have placed yourself on the side of the Commissaryman rather than against him. If you take it for granted that he means to do well and you can offer him help in doing better, there is no need for him to fear you or feel antagonism toward you. Don't make the mistake of trying to explain this to the man. Just adopt a spirit of helpfulness as your fundamental attitude and make it a basis of your comments and actions. Most men will sense your attitude and respond to it.

When you have given criticism you should carry through to see that your directions are being followed. Again, don't be to fussy or obtrusive about it, but be sure that you do the necessary checking. Your kindness and friendliness in offering criticism should not be taken as an indication of weakness, but should be underlaid by a firm purpose to get the work of your general mess done and done well. Expect cooperation from your personnel. Usually that expectation on your part will be enough to ensure complaince with your instructions, but if you find your directions have been disregarded, take action promptly.

ENCOURAGING INITIATIVE

Even more important than knowing how and when to deliver adverse criticism is the art of giving praise and encouragement. One valuable way of encouraging people is to listen to their suggestions for improvement and to ask them from time to time for their opinions on specific problems.

If you use an idea that originated with one of your men, be sure your seniors learn that it was his idea. Don't succumb to the temptation to take the credit yourself. Even if you have added something to the man's original suggestion, it is better to give him the credit. If your men are taking sufficient interest in their work to offer useful suggestions, your seniors will credit you in turn with a good job as a supervisor.

If you can let your men try out their ideas without endangering important operations; this course is often abvisable. Whether the experiment is a success or a failure, the man will have learned something. Moreover, he will realize that you are open-minded; and when you do have to veto one of his suggestions, he will accept your decision with better grace.

You should enjoy seeing your men progress. The small type of mind, the kind that is afraid to trust its own powers, has to keep other people in subjection for fear of being outstripped. On the other hand, most of the world's great men have had pupils who surpassed them in some respect. A real leader is always glad to help others develop their abilities.

WORK INSTRUCTIONS

The food service division consists of the dry subsistence bulk storerooms, the refrigerated spaces, the issueroom, the vegetable room, meat cutting room (butcher shop), bakeshop, galley, messrooms and sculleries, and such other spaces as ice cream making room, and garbage rooms. Small ships have only a few of these spaces. Large ships may have several of some types.

At one time or another, you will be in charge of each of these, and as the senior Commissaryman aboard, you will have complete charge of all spaces and the responsibility for all men working in them. For this reason, you must be fully acquainted with the proper working procedures for all the jobs in the food service division.

GALLEY

Generally, a Commissaryman will be assigned to each watch as watch captain in charge of the galley. If you are a CS1, this may be your billet, under the senior Commissaryman. As watch captain you will be responsible for the daily routine in the galley, including preparation of food, operation, care, and cleanliness of all galley equipment and utensils, care and cleanliness of all galley spaces, and proper working habits and cleanliness of galley personnel. You must be constantly on the alert for, and report to the food service officer, any person on your watch with an illness, or an infection.

Senior Commissaryman

As senior Commissaryman you should have neither custody nor control of the original records of food items received, nor should you prepare public vouchers or subsistence returns. Your duties are confined to the galley, bakery, and other spaces assigned you and the work directly connected with these spaces. You will be responsible for the preparation of the Menu (NavSup Form 1080) for submission to the food service officer.

Only in the absence of the messhall master at arms will you be in charge of the serving line, messhall, scullery, and the area required for the handling of garbage. At all other times, you will coordinate your duties with the messhall master at arms. As senior Commissaryman you are responsible for ensuring that the menu planned by you is prepared by your men in the most economical, sanitary, attractive, and appetizing manner. The messhall master at arms is responsible for ensuring that the food is served on clean, sanitary mess gear, from a clean, sanitary serving line by immaculate, alert messmen. Perfect communication and coordination should prevail to ensure that each of you meets your responsibilities.

MESS DECK

Care of the messhall is the food service officer's responsibility. It is up to him to see that the messhall and mess gear are kept scrupulously clean and that proper discipline and order are maintained. The food service officer is assisted by the messhall master at arms.

Messhall Master at Arms

The messhall master at arms is assigned to the general mess by the executive officer. He coordinates his duties with the senior Commissaryman, but is directly responsible to the officer accountable for the general mess.

Care of the Mess Deck

The deck of the mess should be scrubbed after each meal. Where the scrub water hits the bulkheads, they should be wiped down. Tables also should be scrubbed with a stiff brush after each meal, and particular attention should be given to all cracks and crevices. Any particles of food left in cracks provide food for roaches. Tables and benches with cracks should be reported and a work request made out to repair them. (See fig. 3-2).

Bulkheads and overheads should be scrubbed at least once a week.

GET READY TO SERVE

The watch captain must always have a member of his watch stationed on the serving line to supervise serving procedures and control serving portions.

Messmen should be in whites with aprons and hats whenever they are on duty. (See fig. 3-3.) They should stand inspection for cleanliness each day before each meal. At least once a week they should be given a health inspection by the medical officer or his representative.

The daily menu should be posted on a bulletin board at the mess line entrance so that crew members know what is available before they get to the steamtables. This helps the men to make their selections quickly and therefore speeds the service.

The mess tables and steamtables for a meal should not be set up too soon. The men should be allowed just enough time to have everything ready by the time the food comes from the galley. If they start too soon, the butter will melt, the coffee will not be fresh and hot, the bread will dry out, and the meal will be generally unsatisfactory when serving time comes.

Once they do start to set up the messhall, the messhall master at arms should clear out anyone who does not belong there. This prevents unnecessary confusion in the messhall.

Food should be arranged in logical sequence in the steamtable; that is, gravy should follow the potato and meat items, et cetera.

Before serving begins, the watch captain should make certain that sufficient water is in the steamtable and that the steam is turned on to keep the food hot; however, the steamtable should not be turned high enough to continue cooking the food. The temperature of the water in the steamtable should be maintained between 180°F and 200°F. If a refrigerated cold counter or salad bar is not available, care should be taken to place cold foods such as salads, and desserts on an unheated section of the serving counter (fig. 3-4). Butter and other foods that are best served cold should be placed in a pan on a bed of ice. The individual patties of butter may be arranged on trays with waxed paper between layers. This may be done well ahead of mealtime but the trays should be kept in the refrigerator until time to serve.

Be sure that all items listed on the menu are actually being served.

Fine Points on Serving

Good serving technique is a knack that messmen can and should acquire as they work on the job. Train these men in the proper procedures; then check from time to time to make sure they are following them. Here are some of the main points to keep in mind:

- Food should never be touched with fingers when it is served. A fork, spoon, tongs, or spatula should be used.
- Portions specified by the Galley Worksheet (NavSup Form 1090) should be served. If a man coming through the line doesn't want a particular item of food, or wants a small serving, see that the messmen favor his request. If, on the other hand, he wants more than his share, he may come back for a second helping after he has eaten the first.
- Show your men how and where to place the food on the tray. Insist that they

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Figure 3-2.—Crew's dining area.

exercise care so that different foods are not mixed up on the tray. Nothing spoils an appetite more than a tray on which some messman has decorated the pie or salad with gravy.

- A perforated spoon or ladle should be used to serve foods cooked in liquid, such as vegetables, so that the liquid is drained off before the food goes on the tray.
- Keep the mess line moving right along if the messhall is large enough to seat everyone. If it isn't, hold the line up until seats are vacated by men who have finished eating. When some item of food is almost out on the serving line, the galley should be notified to send more right away so that there is no delay in serving. If some item of food does run out in spite of care, the messmen should check with the watch captain to see if more can be provided. If it can't, a substitute should be provided.
- One or two men should be detailed to watch the tables so that they can replenish supplies of sugar, salt, pepper, and so forth, as they run out.
- If something is spilled on the deck, serving line, or table, it should be cleaned up immediately. Otherwise, it will soon be tracked all over the messhall.
- After the meal has been served, the watch captain should be consulted on the disposal of the leftovers. Quite possibly they can be used in preparing subsequent meals.

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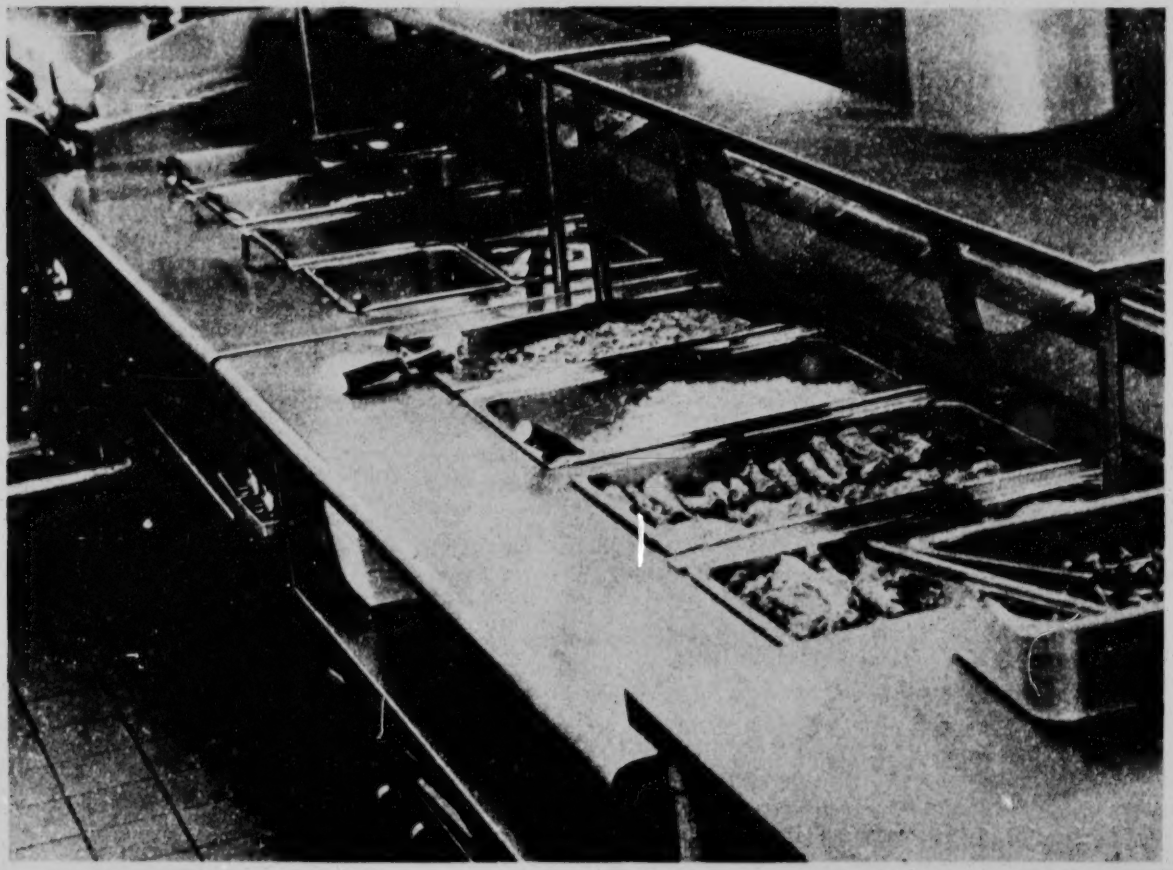

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Figure 3-3.—Serving line.

BEVERAGE BAR

If your messhall has additional room to install a beverage bar, by all means do so. Such beverages as milk, sodas, fruit juices, hot coffee, hot tea, water, and even an ice cream dispenser, can all be centralized in one place. The appearance of a beverage bar will add to the attractiveness of your messhall and cleaning operations will be simplified. Roll away tables for the equipment should be used in keeping the area clean at all times (fig. 3-5).

SCULLERY

One of the most vulnerable spots, as far as the crew's health is concerned, is the scullery. The scullery can become a breeding ground for disease unless proper sanitary precautions are practiced. Dishes, utensils, and suitable cleaning gear and compounds (detergents) should be maintained in sufficient supply. If should be unnecessary to resort to short cuts or speed-up operations whereby proper sanitizing times,

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Figure 3-4.—Salad bar.

temperatures, and routines cannot be maintained. Care should be exercised in the selection of aids for cleaning the equipment for food preparation, food serving, and food storage. The use of steel wool is prohibited. Metal sponges are approved for use in the general mess, but must be used with care to prevent breakage and remnants remaining in the containers that are being cleaned (fig. 3-6).

Effective Scullery Operation

Adjacent to each scullery operation, post complete and concise instructions. Soiled mess gear should be scraped by the messmen. Use of rubber scrapers or nylon brushes are recommended. Always have an adequate supply of mess gear to ensure that gear has been air dried and cooled before re-use.

Check the ventilation to ensure that air circulation is maintained in the scullery. Adequate lighting is also necessary. Be sure to maintain a checkoff list to ensure that all operating equipment has been inspected at least once a week by authorized maintenance personnel.

The main piece of equipment is the dishwashing machine. Here are some important points on its care. The dishwashing machine is equipped with two tanks—one for washing, the other for rinsing and sanitizing. Water in the tanks should be—140° to 160°F for washing and not less than 180°F for rinsing and sanitizing.

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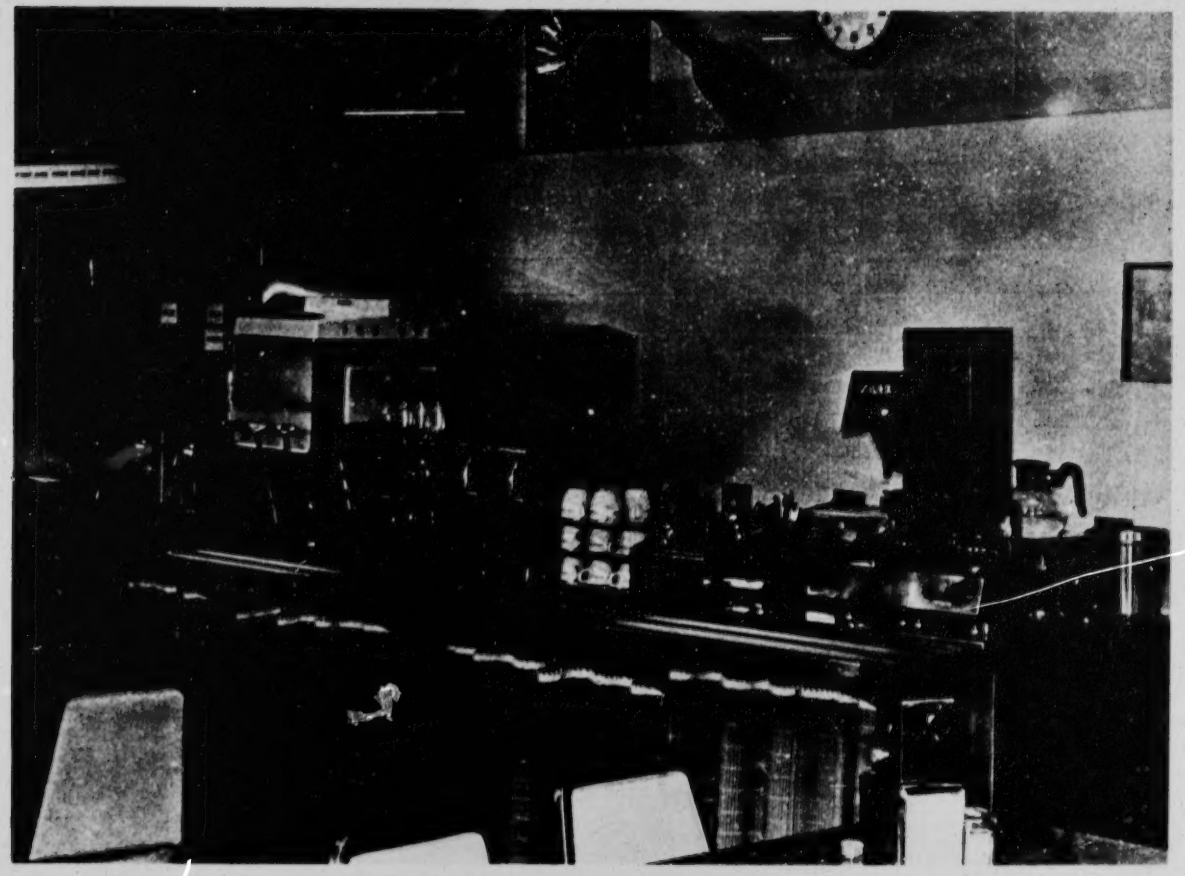

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Figure 3-5.—Beverage bar.

Wash water should not exceed 160° because food residue will be cooked on the mess gear if it does, creating an unsanitary condition. When mess gear is run through rinse water (180°F) it dries in a few seconds when it comes out of the dishwashing machine. Towels should never be used to dry dishes and other mess gear.

Use only standard stock dishwashing compounds designated for use in a mechanical dishwasher. Type I for hard water and Type II for soft water. Ordinary soaps leave film. Standard stock dishwashing compounds must be added periodically while the machine is in operation, depending upon the amount of grease or dirt accumulated and the amount of fresh water added. Fresh water should be added from time to time to cause an overflow of the scum and a partial refreshing of the wash water. Fresh water is precious aboard ship; do not waste it. For rinse tanks, a large amount of steam is needed to keep the water at the sanitizing temperature of 180°.

You must also make sure that the following two parts of the dishwasher are operating properly:

1. The thermostatic control set so that the machine will not pull racks of dishes through unless the temperature of the rinse is 180° or higher.

2. A thermometer on each tank so that the operator can see what temperatures are being maintained.

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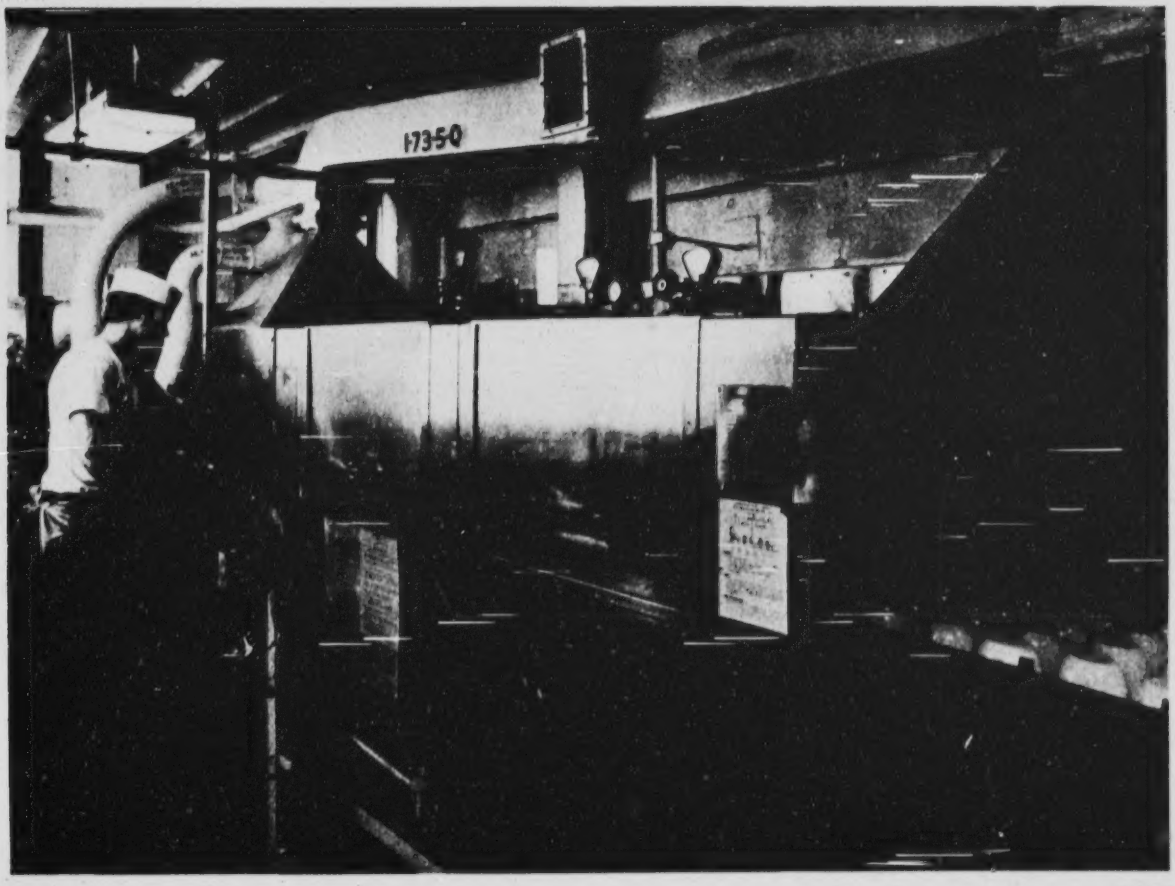

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Figure 3-6.—Scullery machine.

Don't let the scullery messmen force dishwashing machine racks through the machine. The conveyor takes care of this. It is timed so that each rack of mess gear receives a good washing.

Scullery messmen should handle dishwashing machines with care. Metal racks are generally spot welded and may break under rough treatment. If they are broken, dishes will fall through to the bottom of the machine.

After rinsing, dishes and silverware should be allowed to drain with free circulation of air until they are dry. If rinse cycle is operating at 180°F, they will dry readily. Dishwashing machines must be thoroughly cleaned after they have been used.

The messhall master at arms should inspect the dishwashing machine before and during each meal to see that it is operating properly. He should examine the bottom to see if any of the mess gear has fallen in, and see that the pump forces water through all the sprayers and that none of them are clogged. The sprayers are the components that do the cleaning. If they are not functioning, the gear will come out dirty.

The messhall master at arms should inspect the dishwashing machine after each meal to make sure it has been properly cleaned.

If adjustments or repairs are needed on the dishwasher, a qualified repairman from the engineering department should be called in to

place it in good operating condition. Don't let the scullery messmen work on it.

GARBAGE DISPOSAL

Personnel subsisting in the general mess should never have to separate dirty mess gear and refuse. Scullery personnel should receive tray containing chinaware, silverware, and refuse and do all separating.

Two cans are generally used for garbage. In port, edible garbage goes into one. Ice cream papers, cereal cartons, coffee grounds, tea leaves, and other items that can be burned go into the other. At sea, the division is usually made in this way: one can takes all that can be put through the garbage grinder; the other, all burnable trash. The cans should have tight covers and should be kept covered when they are not in use.

Whether you are in port or at sea, garbage and refuse cans should be removed from all mess and galley spaces as soon as possible after the meal has been served. Garbage must not be left in these spaces at night. All garbage and refuse cans must be scrubbed thoroughly each day. Remember that insects and rodents must have food and moisture and that wet garbage provides both.

When the ship is coming into port or waiting for the garbage lighter to come alongside, garbage is usually stowed topside in covered containers until it can be removed. At sea, before dumping garbage overboard, always check with the officer of the deck for permission. In wartime, garbage is never dumped overboard during daylight because it might help an enemy plane or craft spot the ship.

CONSERVATION INSTRUCTIONS

The world's finest foods are provided for the Navy, but the food budget isn't elastic and it's up to you to help keep it within reasonable limits. Waste is one way to send costs shooting skyward. Conservation is the best way to keep costs under control. As the man in charge of the galley, you should make it a matter of pride to have a low record of spoilage and leftovers. Here are a few basic rules to help you avoid needless waste of food.

1. Order only what you need—and have room to store.
2. Store food items properly so that there is no loss from spoilage or insect infestation.
3. Plan, prepare, and serve meals that the men like and will eat.
4. Use leftovers promptly and efficiently.

CONSERVE WHEN ORDERING

The time to start conserving is when you are ordering food items. Know your storage space and order only what you can properly store. Suppose you need a 60-day supply of eggs but have storage space for only a 30-day supply. Don't take a chance on losing eggs by storing them improperly. Order the 30-day supply that you can properly handle, then fill your further needs with whole frozen or whole, dried, powdered eggs.

If you must use deck lockers instead of below-deck compartments for storing fresh leafy vegetables, order only as much of these as will be consumed before spoilage starts, and then fall back on canned, dehydrated, dried, and frozen vegetables which have similar vitamin content.

Never order food you know the men do not like, even if you have storage space for unlimited quantities. If you find that the crew will not eat kale no matter how you prepare it, choose a more popular vegetable with similar food value, so as spinach or turnip greens.

CONSERVATION IN HANDLING

Careful and prompt handling is important. The slightest bruise on a tomato or an apple can start spoilage which will spread rapidly through a bin or crate. The same is true in handling canned goods. A dent in a can may start rust which will eat through and permit spoilage.

CONSERVATION IN PLANNING

You can eliminate waste by planning your menus carefully. Keep a record of the success or failure of several menus by posting to the food preparation worksheet. Note the amount of food left on the trays and listen to the men's comments. If there are gripes, find out why the menu did not appeal to them. Or if the menu was all right, maybe the food was overcooked or improperly seasoned. Or maybe in was cold when it should have been hot, or warm when it should have been cold. Be sure to correct the trouble, whatever it was, in the future.

Maybe your Commissarymen don't know how to prepare a dish you have on the menu. If that's the case, either teach them how to prepare it properly–or don't serve it. Plan some substitute.

Naturally, you can't serve the most popular meal day after day. Your ration budget won't permit it. Besides, the meal would soon become monotonous and lose its popularity. Take one of the less popular menus and try to bring it up to the favorite class. Maybe a little change will make the difference.

CONSERVATION IN PREPARATION

The success or failure of a meal depends a great deal on skillful and well-timed cooking. The successful meal is the least wasteful.

If chops or similar meats are to be served, cook only enough to get the meal started. Then continue preparing the chops during the serving, keeping just ahead of the demand. As the end of the serving line approaches, make an accurate count of how many more servings will be needed.

Many items lose their taste or attractiveness if they are prepared too far in advance or in large quantities. It is good management when progressive cookery is practiced.

Accurate computations will enable you to have just enough food prepared. Keep a record of how much of the various foods are needed to serve each meal. Be sure you get the count right on the number of men who are ashore in the liberty party, or for other reasons. These records will serve as a basis for more accurate calculations in the future. Insist that your men carefully measure out the quantities. Otherwise, accurate calculations are a waste of time.

The proper cleaning and paring of vegetables will eliminate much waste. The spud coxswain must see that potatoes are not left in the potato peeler too long. The eyes of potatoes should be carefully removed with a small paring knife. Boiling potatoes in their jackets helps eliminate waste and conserves nutrients.

Be sure that only experienced personnel open canned items. The contents of each can should be examined carefully before they are emptied into a large container. The spoiled contents of one can will make a whole kettle full of canned food unfit to serve. DOUBTFUL FOOD IS BAD FOOD.

The same procedure should be followed when several eggs are to be stirred, mixed, or beaten together. Each egg should be broken into a small bowl so that it can be examined before it is placed in the large container. In this way, a bad egg can be discovered before it spoils the rest.

Take care that vegetables are not overcooked. Cooking should end just as soon as the vegetables are tender. Longer cooking destroys food value as well as flavor.

All foods fried in deep fat should be removed promptly when they are done. Let them drain in the basket for a few seconds or place them on brown paper to absorb excess fat.

Thoroughly chill all fresh vegetables which are to be used uncooked in salads. Keep them in the refrigerator until it it time to prepare them. Then put them back in the refrigerator to keep them crisp and fresh. Don't put the dressing on a salad until just before it is served, or the dressing may make the fruits and vegetables wilt.

Pork, fish, poultry and veal must always be well cooked no matter what method is used.

Soups are not good if they are greasy. To prevent this, let soup stock cool until the fat hardens on the surface, and then remove it. Use this fat when you make gravies or sauces for meats.

CONSERVING WATER AND FUEL

It is absolutely necessary to keep things clean. But that doesn't mean that you have to waste

water. It isn't necessary to fill a 60-gallon kettle full of water to clean it. It can be cleaned just as well with less.

If a lot of water is used on the deck of the galley when it is being cleaned, waste results. Most of the water usually runs immediately into the drains.

When water boils, remember it can't get any hotter in an open vessel. It will just boil away. Besides, the fresh water on your ship is made in the ship's distilling plant, and it takes precious fuel oil to keep the plant operating. Have the heat turned down to the point where the water barely keeps boiling.

The same is true of oils and fats used for cooking. Excess heat wastes fuel, injures equipment, and may make working spaces around the range uncomfortably hot. Teach your men to use the right degree of heat.

CONSERVING MANPOWER AND EQUIPMENT

One man who knows what he's doing can do the work of at least two who don't—and he can do it in half the time. Remember this when you are planning the bill of fare and when you assign men to specific jobs. Conservation of manpower is important.

Conserve equipment, too, by insisting that your men follow instructions printed on the plates of your ranges, mixers, and other equipment. Be sure that the electric range is always started on low heat and raised to a higher heat as it warms up. This will avoid warping and other damage. The galley watch should also understand that thermostats are delicate instruments and will not stand rough handling.

Cleanliness is all important, but cleaning agents should not be used indiscriminately. For instance, lye should never be used in spaces where food is served.

A Machinist's Mate takes care of the oiling job on your equipment, but it's up to you to be sure that the oiling is done regularly. Usually the galley equipment needs oiling once a week—and oftener if it is under heavier than normal usage. When breakdowns occur, they are always handled by a Machinist's Mate, Electrician's Mate, or some other qualified person. Don't try to make your own repairs. Call for a qualified repairman.

BATTLE FEEDING

FEEDING ON STATIONS

There will be times during shipboard drills, such as general quarters, when you will have to feed the men at their stations. When this is the case, you should be prepared for this type of emergency. You should have at your disposal, an ample amount of equipment, manpower, and food items readily available at all times. Anticipate when the word is likely to be passed to feed on stations and be prepared to comply. You should have on hand in the ready issue room, canned meats, soups, canned vegetables, and sandwich meats that can be prepared in a short time. In this type of feeding you should endeavor to feed the men on station a meal that still meets the standards of a balanced diet.

Semiperishable Foods

Semiperishable food requiring no galley preparation may be distributed in lockers to battle stations to be available when required. This sytem requires constant checking by you to see that the food is not eaten during non-emergencies and to provide for periodic rotation of food items to ensure availability of palatable, unspoiled items. Packaged combat meals, fruit juices, canned tomatoes, or canned beans are considered suitable for this type of feeding on station.

Battle Menus

Battle menus should be prepared by the senior Commissaryman with the help of the food service officer. The food will be prepared and served from the galley to designated representatives from each battle station. These menus may include all of the food requiring no preparation and, in addition, if the use of the galley is at all possible, sandwiches, fresh fruit,

hot dishes, such as a stew, chili con carne, or beans, and a hot or cold beverage. Food carriers, racks, trays, and large coffee pots should be available for this type of feeding.

GALLEY FEEDING

When it is possible to relieve personnel individually or by groups from battle stations, it is desirable that they be permitted to go to the galley or to other auxiliary feeding stations for hot food. When access to the galley is impossible, various auxiliary feeding stations should be set up.

OFFICER PERSONNEL

If the wardroom is secured during conditions that require battle feeding, the officers will subsist in, or from, the general mess and they will pay the regular meal rates promulgated by current Naval Supply Systems Command instructions.

NAVY FOOD MANAGEMENT TEAMS

Excellence in food service is essential to the health and morale of Navy members and to the overall readiness of the operating forces. Because food is a major item of expense, utilization of the best food management, conservation, preparation, and serving practices is necessary. Navy food management teams, through on-the-job training of food service personnel and the provision of expertise in the preparation and service of food, contribute significantly to improvement of the Navy food service program.

ORGANIZATION

Navy food management teams, sponsored by the Commander, Naval Supply Systems Command, are established as separate components of the Navy Subsistence Office. The Navy food management teams are directly responsible to the Navy Subsistence Office for performance of their mission to assist ships and ashore activities in raising the quality and standards of food service, thereby achieving economy and increasing efficiency. For military and administrative purposes, team members are assigned for additional duty to the host command.

TEAMS' MISSION

The mission of Navy food management teams explained as follows is to provide assistance (therefore no report of discrepancies is made to higher authority):

- Participating in the advisory assistance capacity in the operation of the local food service program by working with food service personnel, demonstrating proper techniques in all phases of food service (including management, production, service of food, sanitation, training, and accounting), and motivating food service personnel toward increased efficiency and effectiveness.
- Providing on-the-job training to food service personnel through the "do as I do" method of instruction, employing advanced training aids and techniques.
- Instilling management awareness in responsible food service personnel with special emphasis on high quality food preparation, progressive cookery, proper serving techniques, food service safety precautions and operating procedures, fire prevention, sanitation, and personal hygiene.
- Stimulating professional pride in food service personnel.
- Reviewing the utilization of facilities, equipment, personnel, and other food service resources to evaluate realistically each general mess visited.
- Reviewing food service records, organization and operating manuals, financial returns, and so forth, to determine compliance with the Naval Supply Systems Command Manual and current food service directives.
- Evaluating and assisting in implementing established Department of Defense, Navy, and command food service policies and procedures.

- Assist in the development of patron food service education programs to ensure that personnel understand the food service operation, especially conservation.
- Providing information on and demonstrating new developments in food service and food items.
- Evaluating the practical application of food service techniques, imparted through technical and on-the-job training, programs of instruction and curricula and formal training, making recommendations accordingly to the Navy Subsistence Office.
- Recording observations for follow-up actions to assist in resolving problems beyond the control of the local food service management personnel, through better utilization of manpower and money assets.

Navy food management teams also conduct training in the maintenance of general mess records and the preparation of general mess returns, provide assistance in monitoring the contractual messmen program, and participate in conducting the Ney Memorial Awards Program.

REQUESTS FOR NAVY FOOD MANAGEMENT TEAM VISIT

Activities are encouraged to request food service training assistance visits. Activities who desire assistance submit letter requests indicating two or more convenient periods for the visit. A team visit usually lasts for two weeks, but shorter visits may be arranged if operating schedules preclude that length of time. Team visits normally should not be requested during a yard overhaul, while underway, or prior to shakedown periods of newly commissioned ships. Requests should be submitted one to two months prior to desired dates of visit. The requests are forwarded to one of the following:

- Fourteenth Naval District and Western Pacific area:

  Commander Service Force
  U.S. Pacific Fleet
  Fleet Post Office
  San Francisco 96610

- All other areas:

  Commanding Officer
  Navy Subsistence Office
  Washington, D.C. 20390

REPORT OF A VISIT

At the conclusion of each visit, the officer in charge of the navy food management team will discuss informally the overall operation of the general mess. The commanding officer or his designated representative, the supply officer, the food service officer, and key food service personnel should be present. The officer in charge of the team submits a summary of the visit to the Commanding Officer, Navy Subsistence Office, via the commanding officer of the activity visited.

CHAPTER 4

RATIONS AND ALLOWANCES

Navy general messes afloat and ashore operate on a monetary ration allowance system. The allowances are expressed in terms of dollars and cents per ration and are called "monetary rates."

In 1933 Congress established a legal daily allowance of food for each Navy enlisted man. You as a senior Commissaryman will assist the food service officer who is responsible for adherence to this Federal law. You cannot exceed this allowance. The allowance, originally specified in actual quantities of food, has been converted to a cash equivalent for ease of administration. This varies as food prices vary. Basic daily food allowances are discussed in chapter 7 of this text.

The official document that determines the number of rations credited to the general mess is the Ration Report (NAVSUP Form 27). This form, signed by the executive officer, reports the net number of rations allowed for all categories of personnel subsisted in the general mess.

This chapter defines the various types of rations that are used in the Navy, discusses ration entitlement (personnel entitled to daily rations in kind and personnel not entitled to daily rations in kind), and also tells you how ration credit is determined afloat and ashore.

This chapter is intended to help you find the answers to such questions as:

1. What is the definition of a ration?
2. Which personnel are entitled to rations in kind?
3. What are the responsibilities of the general mess records keeper?
4. What forms are used in determining ration credit?

WHAT IS A RATION?

BASIC DAILY FOOD ALLOWANCE is a prescribed quantity of food, defined by components or monetary value, which is required to provide a nutritionally adequate diet for one man for one day.

SUPPLEMENTAL FOOD ALLOWANCE is a prescribed quantity of food, defined by quantity or monetary value, which, due to unusual or extraordinary circumstances, is required in addition to the basic daily food allowance.

SPECIAL FOOD ALLOWANCE is a prescribed quantity of food, defined by components, quantity, or monetary value, which is required when the use of the basic daily food allowance is impracticable.

NIGHT MEALS are quantities of food which may be furnished enlisted men who stand night watches or perform other assigned duties between 2000 and 0800. The value of food items used in the preparation of night meals is included in the total cost of issues to the galley. Ration credit and sales of night meals are at the rates prescribed in NAVSUP Instruction 4061.9 series.

The number of personnel furnished night meals during in port periods should be reported under column (5) (Night) of the General Mess Control Record (NAVSUP Form 338). Personnel consuming a night meal at an ashore activity will sign a Meal Signature Record (NAVSUP Form 1291). A separate NAVSUP Form 1291 marked "Other (cash sales)" is provided when night meals are sold. The number of night meals fed during an accounting period should not exceed 10 percent of the toal of meals served.

COMBAT MEALS (INDIVIDUAL) may be stocked for use by personnel participating in landing operations or field exercises or for issue

as battle rations. These meals will be carried under the appropriation, Military Personnel, Navy, subhead .3140, in the same manner as regular food items. Stocks are rotated by consumption in the general mess within the period of their storage life. Transfers and issues must be authorized by the commanding officer.

Receipts of combat meals are recorded on the Subsistence Ledger (NAVSUP Form 335) and the Record of Receipts and Expenditures (NAVSUP Form 367) in the same manner as other food items.

A requisition and Invoice/Shipping Document (DD Form 1149) is used to document expenditures of combat meals. When combat meals are issued to personnel participating in training exercises or for rotation purposes, the total number of meals issued and the value of the meals is shown in the quantity and value columns of the DD Form 1149. When combat meals are issued to personnel of other military services, the DD Form 1149 also must indicate the service to which issued. The value of combat meals issued as shown on the DD Form 1149 is reported under the caption "Transfer without reimbursement" on the NAVSUP Form 45.

Ration credit is taken by afloat activities for all personnel fed combat meals.

Combat meals may be sold to personnel for consumption while participating in field exercises. Payment is made at the rates prescribed for regular general mess meals.

SUBSISTENCE AUTHORIZATION

The food items authorized for Navy general messes are listed in the *Federal Supply Catalog*, Group 89, Subsistence. The cognizant office for FSC Group 89 food items for the Navy Department is the Navy Subsistence Office, Washington, D.C.

Check usage restrictions column in FSC Group 89, Subsistence before procuring items for the general mess.

The value of general stores items (such as napkins, paper cups, bread baskets and similar items), returnable containers or cartons (such as bread cartons, beverage containers and similar items), and nonfood items (such as carbon dioxide (CO_2), charcoal, charcoal lighter and ice) used in the general mess in connection with the preparation service or delivery of food, when billed separately from food items are charged to the operation and maintenance allotment of the station or the operating target funds of a ship.

The cost of nonreturnable containers, cartons, or packaging in which the food items are delivered, is charged to the subsistence appropriation in that it is included in the cost price of the delivered product.

RATION ENTITLEMENT

Regular and reserve enlisted personnel of the armed services, officer candidates, cadets of the armed forces academies in a duty status, and prisoners of war are entitled to rations in kind at Government expense under various appropriation acts. Retired enlisted military personnel confined in a hospital or dispensary are entitled to rations in kind.

Destitute survivors of disasters, refugees, civilian evacuees, and American seamen may be fed without charge in Navy general messes. Entitlement is determined and action to effect reimbursement is taken by the Navy Subsistence Office as appropriate from data furnished in the certification required for this category of personnel. Charts 4-1 and 4-2 list the categories of personnel for which a signed certification is required, and for which the certification is not required.

RATION COUNT

Perhaps you have been working as a cook. In that case you probably have focused your attention on the galley and relied on your seniors for the paperwork. But now, as a Commissaryman First Class, you will be stepping into a supervisory billet and must be prepared to furnish all the information that you once depended on other senior Commissarymen to provide.

No doubt you have wondered how the senior Commissaryman knew exactly how many rations to prepare. For example, there was the time he ordered only 600 rations prepared for dinner when he know there were 750 men in the

Chart 4-1.–CATEGORIES OF PERSONNEL–CERTIFICATION REQUIRED

Type of personnel	Date(s) rations furnished	Number of rations	Authority for providing rations	Name of activity to be billed	Signature
Cadets (Military, Air Force, Coast Guard)	Yes	Yes	No	No	Food service officer
Survivors of disasters (without funds)	Yes	Yes	Yes (Note 1)	No	Food service officer
Army National Guard	Yes	Yes	No	Yes	Food service officer
Air National Guard	Yes	Yes	No	Yes	Food service officer
Civilian applicants (Note 2)	Yes	Yes	No	No	Food service officer
Coast Guard	Yes	Yes	No	No	Food service officer
Foreign (by country)	Yes	Yes	Yes (Note 3)	No	Senior or designated representative of each group

NOTE 1: Forward copy of orders, letter request, etc., when available.
NOTE 2: Only for selected types of naval reserve programs.
NOTE 3: Separate certifications are required for officers, enlisted, regular reserve, and each invitational travel order of foreign personnel.

crew. The answer to that was that he had received word that 150 men would be ashore attending firefighting school. Without this advance information, rations would have been wasted. The Ration Report (NAVSUP Form 27) will show you the breakdown of the different categories of personnel eating in the general mess.

RATION CREDIT AFLOAT

During at sea days, general messes receive ration credit for each enlisted member entitled to be fed in the general mess plus meals sold. Days at sea include the days of departure from and return to port. During in port days, general messes receive ration credit for meals actually

Chart 4-2.–CATEGORIES OF PERSONNEL–CERTIFICATION NOT REQUIRED

Category	Comment
Navy enlisted (regular)	None
Naval reserve enlisted	None
NROTC	None
Naval Academy midshipmen	None
Navy enlisted on temporary additional duty or in travel status receiving per diem	None
Marine Corps enlisted (regular)	None
Marine Corps Reserve	None
Marine Corps officer candidates	None
Army enlisted	None
Army Reserve	None
Army Reserve Officers Training Corps	None
Air Force	None
Personnel other than Navy on temporary additional duty or in a travel status receiving per diem	One endorsed copy of orders to accompany NAVSUP Form 27
Prisoners of war	None
Cash sales (all categories of personnel)	Two copies of Report of Subsistence Sales (NAVSUP Form 1327) will accompany NAVSUP Form 27

fed including meals sold. In port is defined as berthed or at anchor in ports of the United States including Alaska, Hawaii and Puerto Rico; or home ports in the case of ships home ported overseas. An accurate count of all members consuming meals from the general mess are made at each meal during in port periods. Any convenient, accurate method of making the count may be used. Ration credit for in port periods is based on the number of meals actually fed.

CROSSING THE INTERNATIONAL DATE LINE

Ration allowances are adjusted to compensate for the change in the calendar day resulting from crossing the 180th meridian. When the time is set back one day in crossing from the west (Japan) to the east (United States), rations are credited for the extra day. When the time is advanced one day in crossing from the east (United States) to the west (Japan), rations are not credited for the lost day.

DAILY PROCEDURES

On the first day of the month, the executive or personnel officer should verbally advise the food service officer of the estimated daily number of personnel entitled to be fed in the general mess. The food service officer should be advised of any changes to the number of personnel entitled to subsist, as changes occur during the month. When rations for foreign or other personnel are included, the food service officer should be so advised.

The food service officers use the daily expected number of rations allowed to:

- post the General Mess Control Record (NAVSUP Form 338) each day at sea;
- plan the quantities of food to be prepared on the following day

- prepare certifications as required, and arrange to have them completed and signed prior to departure of personnel requiring certification. The food service officer signs certifications when signatures of persons in charge of groups cannot be obtained.

MONTHLY PROCEDURES AFLOAT

On the last day of each month, and when general mess returns are submitted upon relief of the accountable officer, the executive or personnel officer provides the food service officer with one original and one copy of a summary monthly Ration Report (NAVSUP Form 27) for the past month. (See figure 4-1). All types of personnel, including categories for whom certifications are required, are listed on the one summary NAVSUP Form 27. Although this form is prepared in the personnel office, you also must understand it thoroughly. Following are specific instructions for making line entries on the ration report:

1. Total on-board	All regular Navy and active reserve enlisted personnel on the roster of the ship or shore activity. Include supernumeraries (regular and active reserve enlisted personnel) that are eligible to eat in the general mess.
2. Commuted	All of the personnel listed in item 1 receiving commuted rations.
3. Temporary duty 4. Leave 5. Hospital 6. AWOL	Make individual entries for each category of those absent for a full calendar day. Do not include any individual who was on board for a meal during a day counted.
7. Blank	
8. Total deductions	Enter the sum of items 2-7.
9. Rations allowed	Subtract "Total deductions" from "Total on board" and enter the result.
10. Navy, regular	In the rations allowed column carry forward "Rations allowed" from the column on the left.
11. All other types of personnel	Below the block "Rations sold for cash" enter the total number of rations allowed for each type of personnel listed. A ration is allowed for each person entitled to rations in kind who is on board for at least one meal during a calendar day. A blank space is provided to list any other type of personnel provided meals at government expense (e.g., prisoners of war, destitute victims of disasters).
12. Signatures	The preparing officer signs the NAVSUP Form 27 in the space provided.

Upon receipt of the monthly summary NAVSUP Form 27 from the executive or personnel officer you may assist the food service officer in completing this form. Directions for the various line entries are:

1. Receipts with charge	The total receipts with charge during the month are posted from column 9 of Requisition Log (NAVSUP Form

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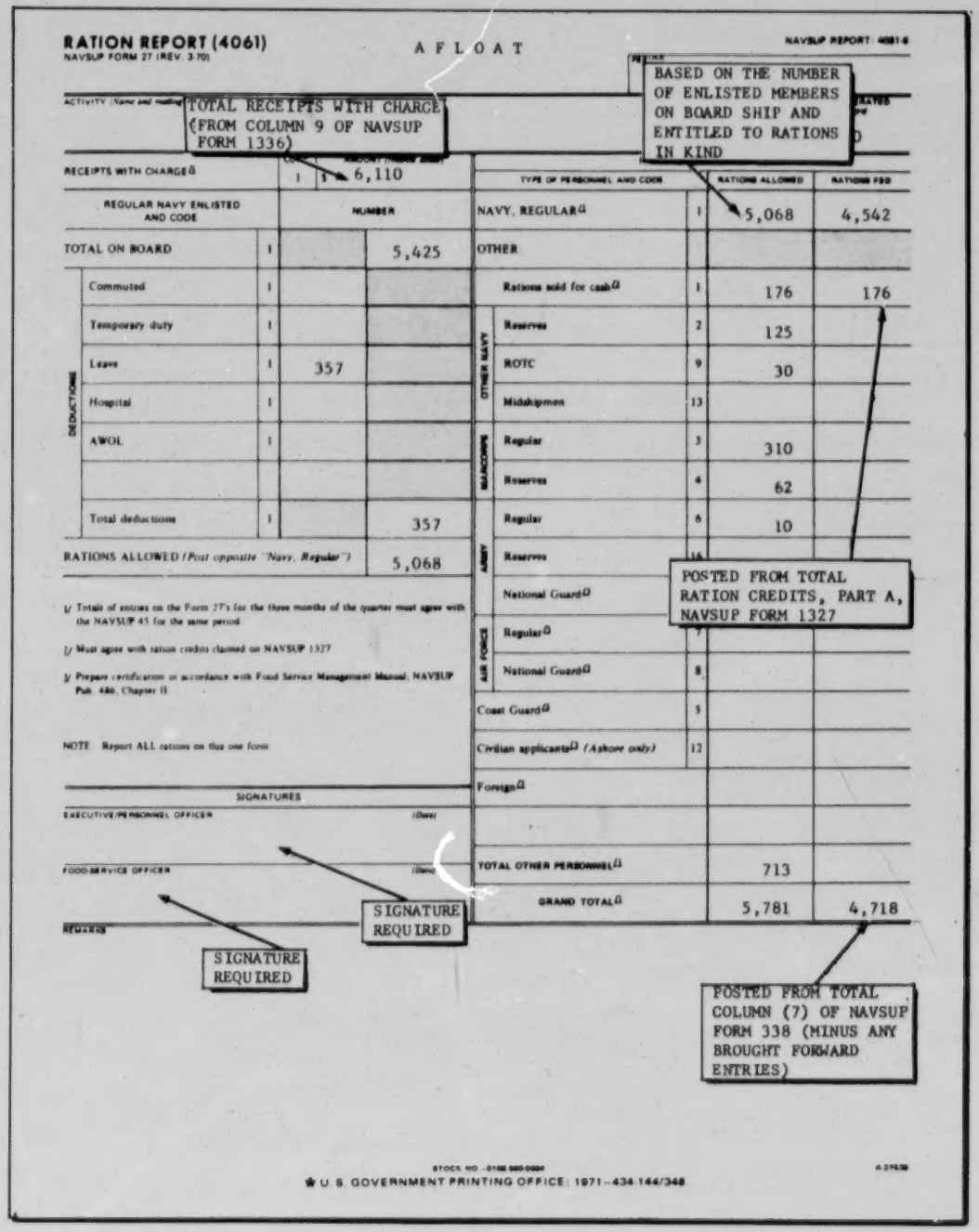

66.30

Figure 4-1.—Preparation of Monthly NAVSUP Form 27—Afloat.

	1336). Ashore activities that do not maintain NAVSUP Form 1336 post this item from the Record of Receipts and Expenditures (NAVSUP Form 367).
2. Rations sold for cash	Ration credits, rounded to the next higher whole ration will be posted from Report of Subsistence Sales (NAVSUP Form 1327).
3. Rations fed	On the "grand total" line under the total from column (7) of the General Mess Control Record (NAVSUP Form 338) minus any "Brought forward" entry in that column. Post to the "Rations sold for cash" the "Total ration credits" from Part A of NAVSUP Form 1327. Subtract the number of rations sold for cash from the number of rations reported in the "Grand total" line and post to the "Navy regular" line.
4. Total other personnel	Add all entries below "Other" and enter the sum.
5. Grand total	Add "Navy, regular" and "Total other personnel" and enter the sum.
6. Remarks	Entries in the "Remarks" section provide a breakdown of personnel for whom "Certifications of rations received" are attached.
7. Signature	The food service officer signs the completed form.
8. Forwarding	Forward the original, with the original of all certifications, to the Navy Subsistence Office.
9. Disposition of duplicate	Retain the duplicate NAVSUP Form 27 for use in preparing the quarterly General Mess Operating Statement (NAVSUP Form 45).

FEEDING CREWS IN THE GENERAL MESS OF ANOTHER SHIP

When ships' crews (including fleet ballistic missile submarine crews) are fed in the general mess of another ship, the food service officer of the ship furnishing the meals includes the additional personnel in the total on board and personnel deduction sections of the NAVSUP Form 27. Ration credit is taken for every member who consumes at least one meal per day. The executive officer or personnel officer of the ship whose crew is being fed furnishes a NAVSUP Form 27 to the support ship on the first day. Further daily reports are furnished only when there is a change in any column on the NAVSUP Form 27.

REPORTING OF RATIONS ALLOWED AND MEALS FED IN PORT

The number of rations allowed while at sea and the number of meals actually fed during in port periods are posted to the General Mess Control Record (NAVSUP Form 338), which provides a daily cumulative record of the financial condition of the general mess.

RATION COST CONTROLS

Daily checks on ration costs are especially significant and essential during in port periods. Accurate meal counts of members consuming meals at barbeques, cookouts, picnics, and other special feeding events supported by the general mess must be provided so that appropriate ration credit can be taken. After each special feeding event the food service officer ensures that food items used have been included in the value of stores consumed and that the number of personnel attending the event has been included in the appropriate "Meals fed" column on the NAVSUP Form 338. Column (12) of the NAVSUP Form 338 is checked to determine the effect of the event on the over/under issue status of the general mess. Ration cost controls are inadequate if entries in column (10) are consistently greater than entries in column (8). Prompt and effective action is taken to ensure that the cost of rations is within the authorized allowance.

RATION CREDIT ASHORE

In order to provide uniform and equitable procedures in accounting for and estimating military feeding costs, a policy was established by the Assistant Secretary of Defense that such programs will be based upon actual food costs per person. Such costs are essential to the planning and estimating of budget requirements and for the development of absentee rates for congressional presentations. The development of per capita consumption costs is based upon the actual number of persons fed in Navy general messes ashore. This is accomplished by the "head count" method whereby a daily count is made of all persons fed at each meal.

DEFINITIONS

Activities with general messes physically located ashore include:

- all ashore activities except naval hospitals operating hospital messes;
- all mobile construction battalions and detachments eating in general messes ashore;
- all fleet and force commands operating general messes ashore;
- all cargo handling battalions eating in general messes ashore;
- all inactive service craft facilities;
- all naval beach groups;
- all messes operated aboard permanently moored ships which grant liberty in accordance with shore command conditions, including naval inactive ship maintenance facilities.

DAILY ALLOWED RATIONS

The executive or personnal officer orally advises the food service officer of any significant changes in the expected total number of rations allowed for all categories of personnel subsisted in the general mess for the following day. The executive officer or personnel officer furnishes this information more frequently if warranted by local operating conditions. When the allowed rations include rations for foreign or other personnel for whom a certification is required, the food service officer is so advised. The food service officer uses the daily expected number of rations allowed to:

- plan the quantities of food to be prepared on the following day after adjusting the net allowed rations by other factors affecting the number of persons to be fed;
- prepare a certification for personnel requiring same, except for the number of rations received, and arrange to have it completed and signed prior to their departure. (The food service officer signs the certification when the signature of the person in charge of such personnel cannot be obtained.

Tenant activities orally advise the host command of any significant changes in the expected number of personnel to be fed in the general mess for the following day.

MEAL PASS

The Meal Pass (NAVSUP Form 1105) is issued by the personnel office to identify each member authorized to eat in the general mess ashore. The NAVSUP Form 1105 is available in the following colors: WHT (white), BLU (blue), CHY (cherry), GRN (green), SLM (salmon), and YLW (yellow) and is requisitioned as cognizance symbol I material.

Responsibility

The NAVSUP Form 1105 is issued and controlled by the command to which personnel are attached and is accepted as valid by any general mess. The possession of a meal pass entitles the holder to consume meals at Government expense in any Navy general mess. Therefore, it is incumbent upon each command to ensure that only those enlisted members entitled to receive such meals are issued and permitted to retain NAVSUP Form 1105.

Security

Stocks of the NAVSUP Form 1105 are serially numbered upon receipt at the local personnel office and the numbers are listed in a meal pass log upon receipt or when issued. Unissued meal passes must be provided positive security and kept under lock until issued. Strict accountability must be maintained and will be checked during inspections and audits.

Issue

Commands issue a meal pass to each enlisted member assigned who is entitled to rations in kind. Meal passes are not to be issued to:

- personnel receiving commuted rations,
- personnel receiving basic allowance for subsistence,
- personnel assigned to another command, except at activities where two or more commands are serviced by a single personnel office.

When a meal pass is issued to an individual, that individual's name and service number are typed or printed opposite the pass number in the meal pass log and the recipient signs his name on the same line.

Recall and Loss

Meal passes must be temporarily withdrawn from personnel departing on leave, travel, TDY, or TAD. The meal pass must be surrendered when leave papers or orders are picked up. Personnel under orders may eat in a general mess by having their orders endorsed. Positive controls must be established to ensure that meal passes are permanently recalled from personnel whose rations are commuted or who are detached. When a meal pass is permanently recalled, or when a meal pass is lost, the entry in the meal pass log is lined through and initialed. If lost, a new pass in series is issued. The food service officer must be advised when a meal pass is lost. Permanently recalled meal passes must be destroyed.

Exceptions

Activities involved in the training of inactive reserve personnel are not permitted to issue permanent NAVSUP Forms 1105 to such personnel, due to the excessive administrative effort to issue, recall, and destroy such passes for the limited periods of time involved. Local procedures should be developed to control the issue of meals to inactive reserve personnel entitled to rations in kind, by other than the use of permanent meal passes.

HEAD COUNT PROCEDURE FOR ASHORE MESSES

A signature head count procedure is used by all shore general messes, except in cases of mass or captive feeding, to determine the actual number of personnel fed at each meal. Every person receiving a meal must sign in ink a Meal Signature Record (NAVSUP Form 1291), figure 4-2, to indicate receipt. Ration credit is based on

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MEAL SIGNATURE RECORD (4061)
NAVSUP FORM 1291 (11-68)

DATE 19 SEPT. 1972 SHEET NO 4 00001

MESS LINE (Ser, Bat etc.)

CATEGORY OF PERSONNEL (Check applicable block)

[X] NAVY REGULAR	[ ] NAVY CADETS	[ ] ARMY REGULAR	[ ] COAST GUARD	[ ] AIR FORCE NATIONAL GUARD
[ ] NAVY RESERVE	[ ] MARCORPS REGULAR	[ ] ARMY RESERVE	[ ] CIVILIAN APPLICANTS	[ ] FOREIGN
[ ] NAVY ROTC	[ ] MARCORPS RESERVE	[ ] ARMY NAT'L GUARD	[ ] AIR FORCE REGULAR	[ ] OTHER (Specify)

	SIGNATURE (First initial and last name)	SERVICE NUMBER	COMMAND/UNIT		SIGNATURE (First initial and last name)	SERVICE NUMBER	COMMAND/UNIT
1	[illegible]	290-32-0707	2028	26			
2	[illegible]	449-28-1935	3145	27			
3	[illegible]	176-14-6469	4327	28			
4	[illegible]	519-26-0173	2130	29			
5	[illegible]	590 36 2156	2287	30			
6	[illegible]	018 26 7940	2954	31			
7	[illegible]	492-32-2210	4218	32			
8	[illegible]	429 64 3403	3015	33			
9	[illegible]	503 03 5822	2742	34			
10	[illegible]	4884053	2613	35			
11	[illegible]	204 26 9906	4280	36			
12				37			
13				38			
14				39			
15				40			
16				41			
17				42			
18				43			
19				44			
20				45			
21				46			
22				47			
23				48			
24				49			
25				50			

STOCK NO. 0104-004-0100

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Figure 4-2.—Meal Signature Record (NAVSUP Form 1291).

the number of signatures recorded. One initial and surname and meal pass number are required of each individual. Command or unit entries are not required by parent (host) activity personnel or by tenant activity personnel if a means is used to identify the tenant activity from the meal pass numbers. Transient personnel are required to annotate command or unit. Individuals passing through the mess line more than once during the same meal sign the NAVSUP Form 1291 only once.

Food Service Officer Responsibilities

The food service officer is responsible for conducting and monitoring the signature head count procedure. He trains personnel in the performance of assigned duties, stressing elibibility of mess patrons to receive rations in kind at government expense.

Master at Arms Responsibilities

The master at arms is responsible for:

- determining the eligibility of personnel passing through the mess line to eat in the general mess,
- obtaining signatures and a legible meal pass number on NAVSUP Form 1291,
- preparing a daily Recapitulation of Meal Record (NAVSUP Form 1292)

In discharging the above responsibilities the master at arms gives special attention to ensuring that only persons entitled to rations in kind are permitted to eat at government expense. He performs the following:

- requires each person to exhibit a valid meal pass and when the person is wearing civilian clothes to exhibit both a meal pass and an identification card,
- permits new arrivals to pass if they show a copy of orders and identification card,
- requires persons on travel orders and receiving per diem to have the travel orders endorsed,
- receives the NAVSUP Forms 1292 for mass feeding in the general mess and makes a manual count of the group as they enter the mess line to verify the total,
- enters "Total verified" and signs on the second signature line of each NAVSUP Form 1292 for mass feeding within the messing area.

Records Keeper Responsibilities

The general mess records keeper is responsible for verifying the entries made on the daily NAVSUP Form 1292 by the master at arms and the cashier, and for entry of meals served to personnel not passing through the mess line. The records keeper:

- verifies totals of each type of personnel listed,
- checks cash sales to ensure that credit sales are included in the count,
- ensures that the NAVSUP Form 1292 prepared for duty food service personnel is accurate and does not include personnel receiving commuted rations,
- checks meals requested and furnished against NAVSUP Forms 1292 for other types of personnel not passing through the mess line,
- ensures that the entry for contract messmen does not exceed the number on duty during the meal,
- reports inconsistencies to the food service officer for corrective action,
- makes required corrections to personnel counts and coordinates the correction with the person responsible for the error. (Both must initial the correction.)

NAVSUP FORMS 1291

The NAVSUP Forms 1291 must be serialized and the headings filled out prior to each meal to ensure control and to preclude loss or misuse of

signature sheets. A master at arms or other person authorized in writing by the food service officer supervises the signing of NAVSUP Forms 1291. The supervising master at arms should be seated on a high stool behind the signature counter where he can verify meal passes and direct personnel to the correct signature sheet.

CATEGORIES OF PERSONNEL

The numbers of each category of personnel fed are determined by requiring personnel in each category (regular Navy, Naval Reserve, Marine Corps, Army, Air Force, Coast Guard) to sign separate forms. The forms must be placed on separate clipboards, color coded to match meal passes or having stenciled signs to indicate the personnel categories. Minor categories may be combined on a single form and the appropriate category entered in the "Command/ unit" column.

NIGHT AND BRUNCH MEALS

Night meals are meals served between 2000 and 0800. Brunch meals served before 0900 hours are recorded as breakfasts. Brunch meals served after 0900 hours are recorded as lunches.

SPECIAL FEEDING OCCASIONS

The number of persons fed at special feeding occasions such as picnics, barbeques, cookouts, etc. are counted and reported for the regular general mess meal which the special event replaces.

MASS OR CAPTIVE FEEDING

At activities with mass or captive feeding, such as recruit training centers, schools, and brigs, and for groups fed outside the general mess, the person in charge of a draft or group of personnel uses a NAVSUP Form 1292 to record the number of each category of personnel to be fed at the meal. He computes the total, writes an appropriate statement in the "Remarks" block such as "Mass feeding–school", "Mass feeding–picnic", and signs his name, grade or rate, and service number on the first signature line.

MASS FEEDING IN THE GENERAL MESS

When a group is fed in the general mess, the person in charge of the group presents the completed NAVSUP Form 1292 to the master at arms on the mess line before the first member enters the mess line. The master at arms makes a count of the group as it passes to verify the total, writes "Total verified", and signs his name on the second signature line. He retains the NAVSUP Form 1292 and assembles it with appropriate NAVSUP Forms 1291 for that meal.

PERSONNEL NOT PASSING THROUGH THE MESS LINE

Meals furnished to personnel not passing through the mess line, such as working parties, in-patients of the dispensary or hospital, duty food service personnel, prisoners, and picnic or outing personnel, are handled as mass feeding. However, persons eating individually in these cases sign the NAVSUP Form 1291 and are excluded from the count on the "Mass feeding" NAVSUP Form 1292. A person conversant with his responsibility is designated to prepare the NAVSUP Form 1292 and to deliver it to the general mess records keeper as soon after the meal as possible and no later than the following morning. The general mess records keeper checks the form to ensure that it is complete and makes such checks as possible to verify the total. He writes "Checked", and signs his name on the second signature line.

RATION RECAPITULATION

The master at arms upon securing the serving line, is the person responsible for supervising the signing of the NAVSUP Forms 1291. He assembles the forms in sequence by category and draws an ink line below the last name of each form. He determines the total number of

signatures for each category of personnel and enters the totals on a NAVSUP Form 1292, prepared in an original and one copy. The total of all categories is entered as the first subtotal. Breakfast, dinner and supper are entered on the same form. Separate forms are not prepared for each meal. The master at arms signs on the first signature line and delivers the NAVSUP Form 1292 to the general mess office after the supper meal. When more than one master at arms is on duty at different meals, each initials the subtotal(s) for which he is responsible and both sign on the first signature line.

DUTY CASHIER

When cash sales are made, the duty cashier enters the total number of meals sold from the general mess in the "Cash sales" block, computes the second subtotal, and signs the certification on the second signature line. The entry opposite the "Cash sales" block includes all general mess meals sold: both those for which cash is collected before admission to the mess line and those sold on a credit basis. This figure should agree with the total recorded in the daily meal record.

FOOD SERVICE RECORDS KEEPER

The food service records keeper audits the head count for each meal and coordinates any required correction with the person responsible for the error. Both initial the correction. The records keeper then makes any required entries for "Contract personnel and personnel not passing through mess line". An entry for contract personnel should include the total number of contract messmen reported on duty for whom the contractor will be billed. Contract messmen are not required to sign the NAVSUP Form 1291. The categories of personnel entered opposite the caption "Contract personnel and personnel not passing through mess line" are indicated in the block in which the entry is made. The food service records keeper computes the grand totals and multiplies the grand totals by the conversion factors to obtain the ration credit for each meal. He adds the ration credits for breakfast, dinner and supper and enters the total in the "Total credit" block. He then signs the NAVSUP Form 1292 on the third signature line and posts the total credit figure to the General Mess Control Record (NAVSUP Form 338). At the option of the food service officer, the total credit figure may be rounded to the nearest whole ration or may be used as computed.

DISTRIBUTION AND USE

The duplicate of the NAVSUP Form 1292 is delivered to the senior Commissaryman or watch captain, as appropriate, for planning purposes. The original is retained by the food service office for use in preparing a monthly summary NAVSUP Form 1292. (See figure 4-3).

MONTHLY RECAPITULATION

At the end of each month, the food service officer prepares a monthly NAVSUP Form 1292 from the accumulated NAVSUP Forms 1291 and the NAVSUP Forms 1292 prepared daily. Monthly or quarterly, at local option, the food service officer submits the monthly NAVSUP Forms 1292, the daily NAVSUP Forms 1292, and all supporting NAVSUP Forms 1291 to an audit board appointed by the commanding officer of the shore activity operating the general mess. The audit board is composed of one to three officers, civilian employees of appropriate grade, or master or senior chief petty officers not associated with the food service operation, and is responsible for ensuring compliance with specified procedures and the validation of signature head count totals.

QUARTERLY CHECK OF PROCEDURES

Not less frequently than once each quarter, the station audit board conducts an audit to ensure that specified controls are being maintained over the issue and recall of the Meal Pass (NAVSUP Forms 1105) and that required security is provided for unissued stocks of NAVSUP Form 1105. In order to check the

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RECAPITULATION OF MEAL RECORD (4061)

NAVSUP FORM 1292 (REV. 12-68)

PERIOD OR DATE: 1 - 31 March 1972

CATEGORY OF PERSONNEL		BREAKFAST	DINNER	SUPPER
NAVY	REGULAR	5,684	12,169	8,638
	RESERVE			
	ROTC			
	CADETS			
MARINE CORPS	REGULAR	535	903	722
	RESERVE			
ARMY	REGULAR	446	564	559
	RESERVE			
	NATIONAL GUARD			
COAST GUARD		573	978	667
CIVILIAN APPLICANTS				
AIR FORCE	REGULAR	86	234	214
	NATIONAL GUARD			
FOREIGN		268	349	310
OTHER (Specify)				
1ST SUBTOTAL		7,592	15,197	11,110
CASH SALES		827	1,307	785
2ND SUBTOTAL		8,419	16,504	11,895
CONTRACT PERSONNEL AND PERSONNEL NOT PASSING THROUGH MESS LINE		305	568	383
GRAND TOTAL		8,724	17,072	12,278
CONVERSION FACTOR		30%	48%	38%
RATION CREDIT				

REMARKS: Highest number of personnel fed --723-- Dinner, 14 March 1972
Due to fluctuations in classes at Fleet Sonar School

TOTAL CREDIT

STATION AUDIT BOARD

The undersigned certify the above to be, for the period specified, an accurate recapitulation of general mess meals receipted for.

SIGNATURE AND RANK, RATE, OR GRADE

SIGNATURE AND RANK, RATE, OR GRADE: W.N. QUINN, LTJG, SC, USN
Food Service Officer

SIGNATURE AND RANK, RATE, OR GRADE

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Figure 4-3.—Recapitulation of Meal Record (NAVSUP Form 1292).

integrity of controls on the issue and recall of meal passes, the audit board selects at random a total of 25 meal pass numbers (or 5% whichever is lesser) from NAVSUP Forms 1291, including tenant activities, and checks the numbers and accompanying signatures against the appropriate meal pass log. The applicable names are then checked against pay or personnel records to ascertain if all are eligible for rations in kind. A small sample of personnel in a leave status is checked to ascertain that NAVSUP Forms 1105 have been recalled. The audit board checks by observation of a meal to see that regulations are being followed to determine the eligibility of general mess patrons, obtain signatures, and when applicable, document mass feeding.

AUDIT OF HEAD COUNT TOTALS

The audit board verifies the totals on the monthly NAVSUP Form 1292 by comparison with the NAVSUP Forms 1291 and daily NAVSUP Forms 1292, makes any required corrections, reconciles the corrections with the food service officer (the food service officer initials the changes) and signs the monthly NAVSUP form 1292 in the spaces provided. The board then delivers the signed NAVSUP Form 1292 to the food service officer and destroys the NAVSUP Forms 1291 (except those for foreign personnel, which are returned to the food service officer for retention for one year). The audit of signature head count totals may be conducted monthly or quarterly at the option of the local command.

REPORTS TO THE COMMANDING OFFICER

A summary report of audit findings is made to the commanding officer after each audit. Deficiencies in controlling NAVSUP Forms 1105, checking the eligibility of mess patrons, and documenting mass feeding, are reported when discovered. Should it be discovered that a person on commuted rations has consumed meals at government expense, a report is made to the commanding officer of the command to which the person is attached. The working papers, from which the reports to the commanding officer were developed are retained with a copy of the reports until reviewed during an audit or inspection.

ESTABLISHING RATION CREDIT

The monthly summary Recapitulation of Meal Record (NAVSUP Form 1292) is used to determine the number of meals fed during the month for which ration credit can be claimed. The Ration Report (NAVSUP Form 27) is used for a monthly summary report to the Navy Subsistence Office of rations allowed and total ration credit for personnel fed.

NAVSUP FORM 1292

The monthly NAVSUP Form 1292 is used to determine the number of breakfasts, dinners and suppers fed to each category of personnel. Meals fed to each category of personnel are converted to rations by multiplying breakfasts, dinners and suppers by the applicable ration factor. The rations so computed, are added and the total is rounded to the next higher whole ration and entered on the monthly summary NAVSUP Form 27.

NAVSUP FORM 27

On the last day of each month, and when general mess returns are submitted upon relief of the accountable officer, the executive or personnel officer provides the food service officer with a summary monthly NAVSUP Form 27 (Figure 4-4), prepared in duplicate, for the past month. All types of personnel, including categories for whom certifications are required, are listed on the one summary NAVSUP Form 27. Upon receipt of the monthly summary NAVSUP Form 27 you may assist the food service officer in completing and processing the form. The following are the food service division's responsibilities:

- enter the rations credits computed;
- compute the grand totals;

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RATION REPORT (4061)
NAVSUP FORM 27 (REV. 7-70)

ASHORE

NAVSUP REPORT: 4061-6

PERIOD: 1 - 30 September 1971

ACTIVITY (Name and mailing address)

DAYS OPERATED (No. of days): 30

RATIONS FED COLUMN POSTED FROM MONTHLY RECAP OF NAVSUP FORM 1292

RECEIPTS WITH CHARGE[1]	CODE	AMOUNT (Nearest dollar)
	1	$ 22,450

REGULAR NAVY ENLISTED AND CODE		NUMBER	
TOTAL ON BOARD	1		21,750
DEDUCTIONS: Commuted	1	2,491	
Temporary duty	1	850	
Leave	1	795	
Hospital	1	45	
AWOL	1	10	
Total deductions	1		4,191
RATIONS ALLOWED (Post opposite "Navy, Regular")			17,559

TYPE OF PERSONNEL		RATIONS ISSUED	RATIONS FED
NAVY, REGULAR[1]	1	17,559	12,315
OTHER:			
Rations sold for cash[1]	1	1,749	1,749
OTHER NAVY: Reserves	2	850	639
	9	25	19
	13	148	129
MARCORPS: Regular	3	2,788	2,119
Reserves	4	65	59
ARMY: Regular	6	172	95
Reserves	16	44	36
National Guard[1]	8	246	215
AIR FORCE: Regular[1]	7	77	61
National Guard[1]	8	150	135
Coast Guard[1]	5	81	65
Civilian applicants[1] (Ashore only)	12	14	13
Foreign[1]		190	189
TOTAL OTHER PERSONNEL[1]		6,599	5,523
GRAND TOTAL[1]		24,158	17,838

SAME NUMBER POSTED TO BOTH COLUMNS FOR RATIONS SOLD FOR CASH

1/ Totals of entries on the Form 27's for the three months of the quarter must agree with the NAVSUP 45 for the same period.

2/ Must agree with ration credits claimed on NAVSUP 1327.

3/ Prepare certification in accordance with Food Service Management Manual, NAVSUP Pub 486, Chapter II.

NOTE: Report ALL rations on this one form.

SIGNATURES

EXECUTIVE PERSONNEL OFFICER (Date)

FOOD SERVICE OFFICER

SIGNATURE REQUIRED

REMARKS

SIGNATURE REQUIRED

STOCK NO. -0108-990-0904 A-37930

★ U.S. GOVERNMENT PRINTING OFFICE: 1971—434-144/346

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Figure 4-4.—Preparation of Monthly NAVSUP Form 27—Ashore.

- enter the value of stores received from column 9 of the Requisition Log (NAVSUP Form 1336);
- sign (the food service officer must sign) the NAVSUP Form 27 and forward the original, with the original of all certifications, to the Navy Subsistence Office;
- retain the duplicate NAVSUP Form 27 for use in preparing the quarterly General Mess Operating Statement (NAVSUP Form 45).

CHAPTER 5
PROCUREMENT OF FOOD ITEMS

Although the supply officer or food service officer is responsible for the requisitioning and procuring of food items, in some instances you may be required to perform these duties. In either case, your experience, knowledge, and your planned menus will be extremely valuable when preparing requisitions.

A thorough knowledge of the mechanics of procurement is essential. Each phase will be discussed and explained in this chapter. However, before any thought is given to the actual preparation of requisitions and purchase orders you must determine your needs. This cannot be done on the spur of the moment. You must know what stocks are on hand and also how much can be loaded in each storage space and when to order.

Some questions that you should be able to answer after reading this chapter are:

1. What items should I consider to develop a balanced load?
2. What catalog should I use when purchasing or requisitioning food items?
3. When requisitioning from other Navy activities, what paper work do I submit?
4. When I receive stores but no dealer's invoice is received by the ship, when and how do I go about making an inquiry?

PLAN THE LOAD

The fleet can't stay at sea without food. You are responsible for ensuring maximum endurance capability of your ship.

During the past few years several crises have arisen that required ships to report to their stations on extremely short notice. There may be other crucial periods in the future that will require similar action.

BALANCED LOAD

You must assist the food service officer in developing a balanced load.

Use the menu as a daily tool for maintaining a balanced load. It is impractical to plan detailed daily menus far in advance of use. However, a broad outline which includes approximate number of times major menu items will be served will help you more accurately determine balanced loading requirements. When deployed, you will want to keep close check on inventories and plan menus to make the best use of your remaining stocks.

Listed below are some of the items that you should consider when you are developing a balanced load:

1. Check fleet commander's operation plan which establishes endurance by ship type for each category of stores.
2. Know your cubical storage space that is available for normal operating conditions and also the possibility of deck storage in the event of emergency operations.
3. Know your ship's operating schedule.

Remember you cannot establish your food item endurance loads on the basis of formulas and graphs alone. You must apply common sense and good judgment to the problem.

If you have usage data that was generated during extended unreplenished operations, you have ideal information to use in planning your endurance load. However, if the only available data represents usage during replenished operations or when normal liberty was granted, it does not reflect requirements for true endurance conditions. Such data can, however, be a help in

deciding which foods to include in your endurance load list. When local usage data or applicable usage data from a sister ship is not available for use in planning load lists, refer to the Subsistence Loading Guide For Small Surface Ships, NAVSUP Pub. 346. This guide is also a helpful tool for commissarymen who have had limited experience in planning load lists.

STOCKAGE OBJECTIVE

The stockage objective for food items should be the sum of the operating level plus the safety level in terms of days of supply. The operating level of supply is the amount of material required to sustain operating requirements between replenishment periods. The safety level of supply is generally the quantity required to be on hand, in addition to the operating level, to permit continued operations in the event of minor interruption of normal replenishment or unpredictable fluctuations in demand. Stockage objectives for ships are promulgated by the appropriate force commander. Stockage objectives for food items for activities in Alaska, Hawaii, and overseas are promulgated by the fleet commanders through their logistics agents. Levels of supply for food items for activities in the United States except Alaska and Hawaii, are promulgated by the Navy Fleet Material Support Office.

REQUIREMENTS DETERMINATION

You are at all times required to have sufficient subsistence on board to provide for a specific period of time. This means enough food to feed a balanced diet. Your fleet commander specifies the period of time in days and this period varies among fleets and among type commanders. It is your responsibility to implement the directives you receive in terms of quantities of specific food items.

Requirements

Destroyers are expected to carry a 45-day stock. You should be ready to get underway at any time and not worry about replenishing for at least 45 days. You must have aboard a sufficient amount of the right kinds of foods to provide a balanced diet during deployment.

Normally fleet commanders specify that ships should replenish every 2 weeks while they are in the United States. The fleet commander may also specify that all ships top-off (fill the storerooms to capacity). This will enable ships to stay at sea for a maximum period without replenishment.

The requirements discussed above may not be valid on your ship. When you report on board a ship for duty, check the fleet commander's instructions for actual requirements.

Fleet Instructions

Fleet commanders furnish instructions for establishing and maintaining a balance load through Atlantic Fleet Requisitioning Guide CINCLANTFLTINST 4210.1 series, COMSERVFORCSIXFLTINST 4000.1 series, and Pacific Requisitioning Guide, CINCPACINST 4235.1 series.

Afloat requisitioners in the Atlantic Fleet use the Consolidated Afloat Requisitioning Guide (Overseas) CARGOLANT (NAVSUP Pub. 4998-A) to order stock from the Mobile Logistics Support Force; Pacific Fleet Afloat requisitioners use the Consolidated Afloat Requisitioning Guide (Overseas) CARGOPAC (NAVSUP Pub. 4998-P). Chapter III, titled Subsistence Requisitioning Tables, contains information on the stock management of food items, requisitioning procedures, and Subsistence Requisitioning Tables. The Tables, with the exception of the available seasonal fresh produce listing, are the same in each publication. By direction of the Naval Supply Systems Command, CARGOLAND and CARGOPAC are issued annually by the Fleet Material Support Office. FMSO also issues changes to both publications on a quarterly basis.

The Subsistence Requsitioning Tables show quantities of food items in terms of eleven alternative balanced loads identified by column headings A through K. Column headings also indicate approximate man days of support provided by each column.

When using either of the above publications, determine your requirements for all items listed in the applicable tables by:

- Checking your storerooms–seeing what stores you have and what space you have.
- Checking your records and seeing what you haved used.
- Being sure you are ordering enough food items to include the private messes aboard.

Ashore General Messes

The normal subsistence requirements table represents quantitative needs of the most commonly used items in ashore general messes. This table may be found in NAVSUP P-486, Chapter 3 and used for the following purposes:

- planning initial stock lists
- establishing stock levels
- developing requisitioning requirements

Storage Data

The normal subsistence requirements table lists requirements for each item, including perishables, for subsisting 1,000 men for 30 days. Therefore, adjust the cube and gross weight data to reflect local delivery schedules for various foods before listing data to estimate storage requirements. For example, the chill storage requirements for milk for 1,000 men for 30 days is 1,063 cubic feet; however, normally milk is delivered daily except on Sunday. To accommodate a 2 day supply, the storage requirement for milk would be reduced to 1/15th of 1,063 or 71 cubic feet. Adjust storage data when requisitioning frozen instead of chilled sausage meats and other cured meats. Chilled storage is recommended for fresh potatoes and for onions. If you have separate designated storage areas for these items adjust chill storage requirements accordingly. Storage requirements reflect only the space required for the foods in their packaging. You must estimate the additional space required for air circulation, aisles, shelves, and battens. The many variations in storage space configuration make a standard adjustment impractical.

Afloat General Messes

The 45 day subsistence endurance base and the 6 month requirement for spices and low use staple items contained in NAVSUP P-486, Chapter 3 are guides for use in planning readiness requirements for those phases of ships' with prescribed endurances which extend beyond 30 days. The subsistence endurance base includes a larger proportion of dehydrates and other spacesaving items and a smaller proportion of refrigerated items than is generally used when operating conditions permit regularly scheduled replenishment or more bulky perishable items. When combined with 30 to 45 day stock levels reflecting individual ships' normal usage it will, therefore, provide endurance levels which can be more readily adapted to the storage space limitations of the ships than levels based upon normal usage alone.

Menus for Extended Endurances

The meal summaries in NAVSUP P-486, Chapter 3 show how many times each menu item can be served using the 45 day subsistence endurance base stocks listed. Consider these meal summaries and local acceptance when adapting the 45 day subsistence endurance bases to on board stowage capabilities, and as a basis for planning a "readiness menu" for implementation during extended operations or when replenishments are delayed.

Procurement Restrictions

Food items authorized for Navy use are listed in the Federal Supply Catalog, Federal Supply Classification Group 89, Subsistence. Requests for exceptions or deviations from usage restrictions must be submitted to the Navy Subsistence Office with complete justification. Specialty items authorized for general mess use are promulgated by Naval Supply Systems Command instructions. Check NAVSUP P-486, Paragraph 3031 for further information about procurement restrictions.

FIGURING SPACE AVAILABILITY

Now that you know how to estimate quantities, you must learn to estimate stowage space. You don't want to order more than can be stowed.

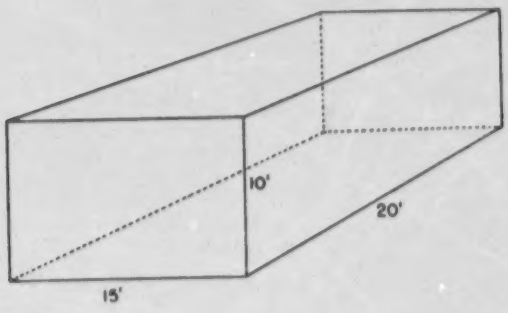
The capacity of a compartment shpaed like the one shown in figure 5-1 is found by multiplying the length by the width by the height.

20 x 10 x 15 = 3000 cubic feet.

Unfortunately, all stowage spaces are not this easy to figure. Many times there are coils, pipes, lights, and required passageways or aisles, that prevent you from using all the space. You will not be able to pack or stow food items up to the overhead or from bulkhead to bulkhead, because room for ventilation and access to the food items must be provided.

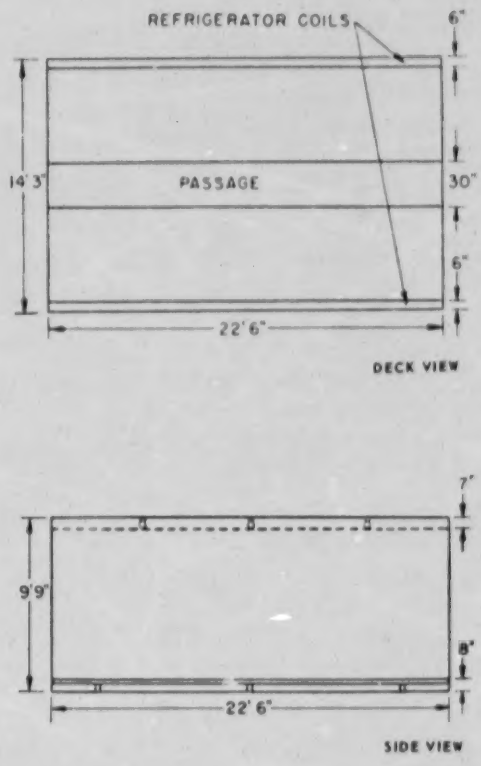
For example, a stowage space 22 feet 6 inches long, 14 feet 3 inches wide, and 9 feet by 9 inches high is shown in figure 5-2. There are coils extending out 6 inches from the bulkhead along both the long sides of the space. Also, a 30-inch passageway must be provided down the center of the space. Study figure 5-2 and notice the allowances that will have to be made for the coils and passageway. In addition, the lights extend down 7 inches from the overhead, and gratings 8 inches high were placed on deck as shown in (fig. 5-2), the side view.

To find the cubical capacity of this stowage space, write down the actual dimensions of the space. Then subtract the dimensions of the allowances you will need to make, like this:



90.4

Figure 5-1.–Rectangular space.



90.5

Figure 5-2.–Space with obstructions.

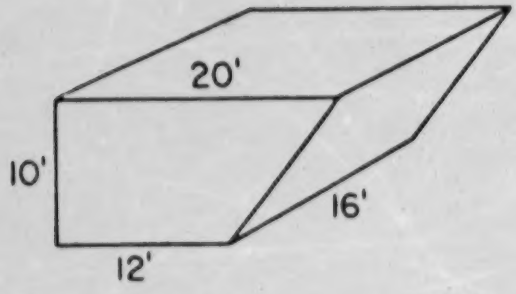
22'6"	Total length	14'3"	Total width	9'9"	Total height
	less	2'6"	Passage	7"	lights
		1'	Coils	8"	gratings
22'6"	Usable length	10'9"	Usable width	8'6"	Usable height

Using these new dimensions proceed as before:

22½ x 10¾ x 8½ = 2055 15/16 cu ft.

You may have a stowage space shaped like the one shown in figure 5-3. First you will have to get the average width by adding the two widths together and dividing by 2:

$$\frac{12' \text{ plus } 20'}{2} = \frac{32'}{2} = 16 \text{ feet}$$



90.6

Figure 5-3.—Irregular space.

Then complete the problem by multiplying this average width by the length and by the height:

16' x 16' x 10' = 2560 cubic feet.

SPECIAL SPACE PROBLEMS

Some food items such as frozen meats must be kept in a special type of storage. The capacity of these spaces limits the amounts you may order.

When planning for an extended cruise you may find that freeze space on your ship is not adequate to store the total meat requirements. You will want to load canned meats to supplement your frozen meat supply. NAVSUP Pub. 486 paragraph 7004 and the table "Substitution Factors for Ration Dense Foods" lists the factors to use when converting pounds of frozen meat items to canned meat counterparts.

METHODS OF PROCUREMENT

Messes ashore and ships in port normally submit requisitions for authorized food items FSC Group 89, Subsistence, to the nearest naval supply support activity. Deployed ships shall submit requisitions to a store ship (AF), combate store ships (AFS), fast combat support ship (AOE) or other afloat activity. When normal sources are not available, food items may be procured by transfer from other military sources and United States Government departments. Food items, such as fresh dairy products and commercially prepared bakery products, as authorized, normally are obtained in the United States by placement of delivery orders against indefinite type contracts. Material is taken up as a receipt from purchase. Brand name contracts (Defense Supply Agency Supply Bulletin, SB10-500 series) are not authorized for use in obtaining food items for the general mess. Further information concerning sources of supply, procurement, local restrictions, and so forth are contained in NAVSUP Pub. 486 paragraph 3030.

PROCUREMENT PUBLICATIONS

Certain publications are required when you requisition or purchase food items. The *Federal Supply Catalog*, Group 89 Subsistence, is used to requisition items of food from Navy activities and other Government departments and agencies. Contract bulletins are referred to when you purchase food items under contract.

Federal Supply Catalog

The Federal Supply Catalog, Group 89, Subsistence furnishes the identification and management data for items required by the Army, Air Force, Marine Corps, and Navy. It provides the official source of identification for all supply and procurement activities. The Stock List is published annually and updated by the publication of quarterly cumulative Change Bulletins and by periodic noncumulative Change Notices as required. See figure 5-4.

Group 89 (except class 8965) contains items for which activities in the DOD have recorded requirements. Part I, Alphabetical List, is a list of all food items arranged in alphabetical sequence within each of the following classes:

8905 Meat, Poultry, and Fish
8910 Dairy Foods and Eggs
8915 Fruits and Vegetables
8920 Bakery and Cereal Products
8925 Sugar, Confectionery, and Nuts
8930 Jams, Jellies, and Preserves

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ACTION CODE	INDEX NUMBER	FEDERAL STOCK NUMBER	PERISHABILITY	DESCRIPTION	UNIT OF ISSUE	CONVERSION FACTOR	USAGE MANAGEMENT CODE	REQUISITION CODE
		8905		FSC CLASS 8905 MEAT, POULTRY, AND FISH				
	50	551-9908	P	BACON, SLAB, CHILLED, cured, smoked, 8 to 14 lb, Fed PP-B-0081(Army-GL), type II, form A, class 1	LB	1.000	a	
	60	551-9910	P	BACON, SLAB, FROZEN, cured, smoked, 8 to 14 lb, Fed PP-B-0081(Army-GL), type II, form A, class 2 or 3	LB	1.000	-	
	70	782-6413	P	BACON, SLICED, FROZEN, cured, smoked, 1 lb partial vacuum pg, Fed PP-B-0081(Army-GL), type II, form B, style 3, class 2 or 3	LB	1.000	-	
D		551-9907						
	80	403-9592	P	BACON, SLICED, FROZEN, cured, smoked, bulk shingle packaged, Fed PP-B-0081(Army-GL), type II, form B, style 1, class 3	LB	1.000	a	
C	90	403-9681	P	BACON, SLICED, FROZEN, cured, smoked, reformed slab,	LB	1.000		
				35032			d	
	105	926-6769	NP	BACON, SLICED, PREFRIED, smoked, 25 oz flexible vacuum pg, KLABS Limited Production Purchase Description 12-66	PG	1.563	e	V
	110	151-6467	P	BACON, SLICED, PREFRIED, FROZEN, cured, smoked, 1 lb flexible pg, GL Limited Production Purchase Description 32-70	LB	1.000	e	V
A	115	151-6590	P	BEEF, BONELESS, FROZEN, breakfast steaks, portion	LB	1.000	e	V
				type III, style 1, 2,				
A	130	151-6576	P	BEEF, BONELESS, FROZEN, grill steaks, sirloin butt (20% min), loin strip (26% min), rib eye (28% min), tenderloin (15% min), US good grade, MIL-B-0035079 (GL)	LB	1.000	-	
A	135	151-6589	P	BEEF, BONELESS, FROZEN, minute steaks, portion cut, US good grade, KLABS Limited Production Purchase Description 12-71, type VI	LB	1.000	e	V

17.65

Figure 5-4.–Part I, Alphabetical List, of the FSC, Group 89.

8935 Soups and Bouillon
8940 Special Dietary Foods and Food Specialty Preparations
8945 Food Oils and Fats
8950 Condiments and Related Products
8955 Coffee, Tea, and Cocoa

8960 Beverages, Nonalcoholic
8970 Composite Food Packages
8975 Tobacco Products

Part I contains the following descriptive and related management data:

1. Action Codes. A series of codes denoting additions, deletions, or changes to published data, as follows:

A (ADD) – Indicates FSN not included in a previous publication.
B (REINSTATE) – Indicates that the FSN previously deleted from a publication is being reinstated.
C (CHANGE) – Indicates a change in descriptive and/or management data since the previous publication. An asterisk is placed to the right of the element(s) of management data that have changed.
D (DELETE) – Indicates that an FSN has been deleted and not replaced.

2. Index Number. A sequencing number assigned to each item in accordance with its alphabetical position. This number should not be used for identification purposes.

3. Federal Stock Number (FSN). An 11-digit number assigned to each item of supply. The first 4 digits appearing at the top of the page represent the Federal Supply Classification which applies to all items on the page. The remaining 7 digits of the FSN constitute the Federal Item Identification Number (FIIN), which identifies each individual item.

4. Perishability. All items are identified as either NP, nonperishable (semi-perishable), or P, perishable.

5. Description. The item descriptions included in this group are the approved Federal item identifications arranged in narrative form. The description includes specifications and other documents or reference numbers when applicable.

6. Unit of Issue. This is the unit at which the item is priced and issued. The two position alpha designation that indicates the physical measurement, the count, or when neither is applicable, the container, or shape of an item for purposes of requisitioning by, and issue to, the end user, and is that element of management data to which the unit price is ascribed.

Unit of issue designations are listed below:

BG	bag
BR	bar
BT	bottle
BX	box
CK	cake
CN	can
CO	container
DZ	dozen
EA	each
GL	gallon
HD	hundred
JR	jar
LB	pound
ME	meal
MX	thousand
PG	package
PZ	packet
QT	quart

Where unit size is not specified, it is not an essential supply requirement of the item and you determine these on local purchase items.

7. The factors incorporated in the Federal Supply Catalog, Group 89, Subsistence are the weights for translation of unit of issue quantities of the item into a common poundage denominator. Factors may be employed directly or inversely. Directly, as multipliers, they permit exact reduction of bulk units of food into equivalent net pounds. Inversely, as divisors, they may be used for reconversion of quantitative poundages into equivalent unit of issue quantities. Weight is expressed in terms of pounds and decimals of pounds. Items peculiarly transacted for and handled on a drained rather than a gross container content basis are denoted by the • symbol DW. Items not normally reducible to equivalent poundages for supply operations purposes are designated by 1,000 (NC). The figure 1,000 is provided for machine processing purposes only.

8. Usage Management. Management of the usage of items is indicated by the following codes. Where two or more codes are shown,

usage is authorized by all management codes listed for the item. For example, if "b" and "d" are listed, the item is authorized for oversea and afloat use and for use in Standard "B" Ration and authorized reserve stockage programs.

CODE	DEFINITIONS
a	Domestic use only.
b	Oversea and afloat use only.
c	Controlled item. Requisitions require approval by appropriate military service headquarters.
d	For use in Standard "B" Ration and authorized reserve stockage programs only.
e	Test item.
f	Therapeutic feeding only.
g	Flight feeding, box lunches, or small isolated units only.
h	Submarines and ships 99 or less only.
j	Central processing facilities and/or milk plants only.
k	Indigenous feeding only.
m	Afloat use only.
t	Special management attention to exhaust stocks at all levels.
x	Ration component procured solely by DPSC for assembly into composite food packages.
–	No restriction.

9. Requisition Code. As an aid to requisitioners, the source of supply for each nonperishable item is indicated by one of the following codes:

CODE	EXPLANATION
D	Special procurement requisition to DPSC for direct vendor delivery.
T	In stock and being issued until exhausted at all levels. Not authorized for future procurement.
U	Ration components procured solely by DPSC for assembly into composite food packages.
V	Test item. Special requisitioning instructions will be furnished to selected installations.
W	Requisition to Headquarters DPSC (S9S) Philadelphia, Pa.
Y	Purchase by retail supply activity, CONUS installations. Purchase assistance may be requested from Regional Headquarters DPSC, if required. Oversea: Forward requisitions to Headquarters DPSC (S9S) as directed.
Z	Requisition to Defense Personnel Support Center, Philadelphia, Pa. (Under certain circumstances requirements for items coded "Z" are purchased against requisitions for direct delivery to the customer. For special instructions see: Oversea requisitioners–DSA DPSC Oversea Subsistence Requisitioner's Handbook 4235.1; CONUS requisitioners–DSA DPSC CONUS Nonperishable Subsistence Requisitioner's Handbook 4235.2)

10. Special Requisition Items. The items (listed under paragraph 62(10)) in FSC group 89 catalog are subject to special requisitioning and direct vendor delivery to the requisitioning activity as indicated by Requisition Code "D".

11. The source of supply for perishable items is the servicing Subsistence Regional Headquarters, DPSC, to which the requisition is assigned, except.

a. Items coded "S", which are for purchase by retail supply activity (Overseas: Servicing Port Regional Headquarters), will be procured by Regional Headquarters for CONUS users upon request.

b. Items coded "V", which are test items subject to special requisitioning instructions to selected installations.

c. Fresh dairy products and fresh bakery items, which are authorized to be procured by retail supply acitivities but which may be supplied by DPSC upon mutual agreement between the Subsistence Regional Headquarters and the retail supply activity concerned.

Part II, Case Lot Data, is arranged in numerical sequence by Federal stock number. It provides weight, and dimensional data applicable to unit package for items in part I for which these data are available. See figure 5-5.

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ACTION CODE	FSN	INDEX NUMBER	PACKAGED UNIT	PACKING DATA							
				NO. OF UNITS PER CASE	NO. OF CASES PER PALLET	CASE GROSS WEIGHT (LBS)	CASE NET WEIGHT (LBS)	CASE CUBIC FEET	CASE DIMENSIONS (INCHES) LENGTH	WIDTH OR DIAMETER	HEIGHT
C	8905-623-8284	850	CN	24	40*	52	44	1.16*	16.6	12.6	9.6*
D	8905-627-6556										
	8905-074-2803	140	LB	25		27	25	.63	16.0	12.0	6.0
	8905-082-2343	1470	LB	40		45	40	1.49	16.0	14.0	11.5
	8905-082-5733	690	BX	5		55	50	.31	11.3	10.8	4.5
	8905-118-2322	1160	LB	25		26	25	.38	15.4	8.0	5.3
	8905-119-4362	1160	BX	12		30	24	1.63	17.0	12.3	13.5
	8905-126-3393	870	LB	80		88	80	1.40	22.0	11.0	10.0
	8905-126-3416	580	LB	54		60	54	1.86	23.0	17.0	8.2
D	8905-126-3421										
	8905-126-4020	1020	CN	6	34	42	36	.75	11.3	9.6	13.4
	8905-126-4033	1370	LB	70		75	70	1.76	25.7	12.0	10.0
	8905-126-4056	960	LB	70		75	70	1.78	25.7	12.8	10.0
	8905-126-4062	1120	LB	50		53	50	1.25	20.0	12.5	9.0
	8905-126-8724	1260	LB	50		53	50	1.16	21.0	16.0	6.0
	8905-126-8743	1240	LB	50		53	50	1.25	20.0	12.0	9.0
	8905-126-8756	920	LB	46		48	46	5.31	54.0	17.0	10.0
	8905-127-3148	250	CN	6	34	44	36	.75	11.3	9.6	13.4
	8905-127-8208	970	LB	40		65	60	1.67	16.0	12.0	24.0
	8905-127-[illegible]		LB	60				1.67			
	8905										
	8905-164-0463	1400	LB	50		54	50	1.22	19.0	10.0	14.0
	8905-164-0467	980	LB	50		55	50	5.06	27.0	18.0	18.0
	8905-164-0469	1030	LB	50		54	50	1.22	19.0	10.0	14.0
	8905-164-0485	1110	LB	50		54	50	1.22	19.0	10.0	14.0
	8905-164-0488	960	LB	24		28	24	1.68	21.0	12.0	11.5
	8905-164-0490	760	LB	50		54	50	1.22	19.0	10.0	14.0
	8905-164-6874	1420	LB	50		60	50	1.44	12.0	13.0	16.0
C	8905-170-9208	640	CN	24	48*	30	23	.89	14.3	10.8	9.5
D	8905-170-9480										
C	8905-170-8244	420	CN	96	36*	43	33	1.08	18.2	12.2	8.4
C	8905-170-8246	860	CN	96	36*	43	33	1.08	18.2	12.2	8.4
	8905-170-9698	560	LB	70		75	70	1.78	25.7	12.0	10.0
	8905-177-5017	220	BG								
	8905-240-1261	1650	LB	100		101	100	7.18	62.0	25.0	8.0
	8905-240-1262	1660	LB	100		101	100	7.18	62.0	25.0	8.0
	8905-252-7669	830	LB	50		54	50	1.22	19.0	10.0	14.0
	8905-252-7978	300	LB	60		65	60	1.67	16.0	12.0	24.0
	8905-256-3794	900	CN	24	72	26	17	.65	12.5	9.5	9.5
	8905-262-7274	1550	LB	60		68	60	1.58	31.0	16.0	9.5
C	8905-267-0040	1510	CN	48	56*	27	20	.39	14.2	10.7	7.8
	8905-267-1933	670	LB	12		16	12	.58	14.3	11.0	9.5
	8905-273-3622	1350	LB	60		65	60	1.89	22.0	17.5	8.3
	8905-285-2075	310	LB	50		54	50	1.17	21.0	16.0	6.0
C	8905-293-0000	1560	CN	96	50*	29	21	.78	16.7	11.2	7.2
	8905-299-1316	260	LB	60		65	60	1.67	16.0	12.0	24.0
	8905-299-1326	1450	LB	60		66	60	2.63	22.0	16.5	12.5
	8905-299-1330	1380	LB	60		65	60	1.67	16.0	12.0	24.0

90.41

Figure 5-5.—Part II, Case Lot Data, of the FSC, Group.

REQUISITIONING FROM OTHER NAVY ACTIVITIES

The bulk of your food items will be procured by submitting requisitions, DOD Single Line Item Requisition System Document (DD Form 1348 or 1348M or Subsistence Requisition Document NAVSUP Form 1059A, B, and C to supply activities ashore or to other ships. DD Form 1348 or 1348M is used as a demand document to obtain all FSN items. NAVSUP Form 1059A, B and C are used to procure perishable food items.

Letter and message requests may also be used when appropriate.

When your ship is deployed most of its support comes during UNDERWAY REPLENISHMENT. The Area Service Force Commander prescribes the requisitioning formats and requisitioning channels for these replenishments. Utilize the underway replenishment system that is used in your area–Provisions (POP) and Big 20 Ordering Procedures for Atlantic based ships, and the Underway Replenishment Guide for Pacific based ships. The Underway Replenishment Bill should be part of your Ship's Orders and Regulations.

MECHANIZED REQUISITIONING

Nonautomated activities receiving semiperishable food items from a mechanized supply activity within the United States are provided prepunched and interpreted decks of the DOD Single Line Item Requisition System Document (mechanical) (DD Form 1348m) for all semiperishable food items authorized for use in Navy general messes. The following data are prepunched on the DD Form 1348m:

Card column	Field legend	Entry
1-3	Doc ident	AOA for standard items AOD for nonstandard items
4-6	Rout ident	Blank
7	M&S	3
8-18	Stock number	Each authorized item
19	Addt'l	A, B, or C/1, 2, or 3
20-22	Addt'l	Blank
23-24	Unit of issue	As applicable
25-29	Quantity	Blank
30	SV	N, R, or V
31-35	Req'ner	Unit identification code of requisitioner
36-39	Date	Blank
40	Serial	9
41-43	Item code	From Master List of Subsistence Item Codes issued by NAVSUBSOFC Instruction 4061.3 series
44	Dem	R
45-50	Supplementary address	Blank
51	Sig	A
52-53	Fund	As applicable
54	Distribution	Blank
55-56	Distribution	9M
57-59	Project	Blank
60-61	Pri	As applicable for routine replenishment of consumable stock by the requisitioner
62-64	Req del date	Blank
65-66	Adv stat	Blank

Automated customer activities do not receive prepunched decks of DD Form 1348m from the supply point. Such activities prepare their own requisitions. Any requisitioner may elect to submit manually prepared requisitions on DOD Single Line Item Requisition System Document (Manual) (DD Form 1348).

Supply activities with mark sense equipment may vary local procedures as necessary for maximum utilization of mark sense capability. However, the requisition cards must be of a type and format universally acceptable to all mechanized activities.

Deck Maintenance

The cards in the requisition decks are arranged in the order in which the items appear on Subsistence Report (NAVSUP Form 1059-1A (Semi-Perishable)). The three digit code number in the last three columns of the serial number field (card columns 41-43) provides a simple alpha/numerical order of arangement. Items that do not appear on NAVSUP Form 1059-1A but

have codes assigned to them on the Master List of Subsistence Item Codes are arranged in a supplementary deck by code number.

Physical Condition and Updating

The requisition cards are maintained in perfect physical condition. Frayed, torn, or bent cards will cause delay in processing and may delay delivery of material. A repalcement is requested for any card that becomes distorted. New cards received from a supply activity are filed promptly in the requisition decks, and cards are removed immediately upon request of the supply activity.

Rough Requisition

A rough requisition is prepared on Subsistence Report (NAVSUP Form 1059-1A (Semi-Perishable)) by inserting:

1. the Julian date in the upper right corner,
2. the quantity desired under "Quantity" (even case quantities are requisitioned except for items, such as condiments, which the support activity authorizes for issue in broken case lots).

This rough requisition is used to prepare smooth requisitions on prepunched DD Form 1348m and serves as a retained record of requisitions submitted. The rough requisition NAVSUP Form 1059-1A is filed in the outstanding requisition file. It may be used when material is received to identify and check receipts.

Smooth Requisitions

To prepare smooth requisitions, the requisitioner pulls one prepunched DD Form 1348m from the requisition deck for each item required and inks in (do not punch) the following data on each card. The first two items are transcribed from the rough requisition.

1. Block 8–Quantity desired (in even case lots).
2. Block 12–Serial number (a four digit number beginning with a 9 and the three digit alpha/numerical subsistence item code).
3. Block 15–Use of this block is optional. It may be used to provide delivery information to the supply activity or to provide storage location information to receiving and storage personnel.

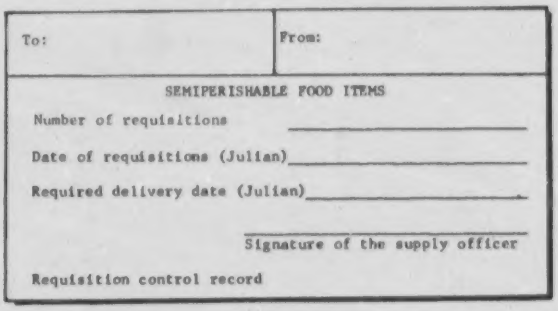
Do not insert a routing identifier in data block 2, a date in data block 11, or a required delivery date in data block 21. This data is provided on a requisition control record. (See fig. 5-6).

Special Requisitions

Requisitions that require data in the "Remarks" blocks are manually prepared on DD Form 1348. These may include requisitions for nonstandard items, special project material, composite food packages (combat meals), material for which special accounting data must be provided, and emergency requisitions that require special handling.

Requisition Control Record

Prepare the requisition control record on machine card size and submit it as a cover letter with each lot of prepunched requisitions. The



90.58

Figure 5-6.–Requisition Control Record.

requisition control record contains the following information:

- To:–The supply activity.
- From:–The requisitioning activity.
- Semiperishable food items–(as a title).
- Number of requisitions–the total number of requisitions forwarded by cover letter.
- Date of requisitions (Julian)–The date that the requisitions are delivered or forwarded to the supply activity.
- Required delivery date (Julian)–The required delivery date must be realistic and provide adequate time for routine processing and delivery. Ships may enter an earlier than normal required delivery date when necessary and annotate beneath the date, "Based on scheduled deployment" or "Based on availability of pier space."
- Signature–The requisition control record is signed by the supply officer of the requisitioning activity or by his designated representative.

MANUAL REQUISITIONING

All of the entries prepunched on the Form 1348m must be made by typewriter when preparing a manual requisition of DD Form 1348 (see figure 5-7). In addition the following data blocks are completed as indicated:

Block	Entry
A	Name and unit identification code of the supplying activity.
B	Name and unit identification code of the requisitioner.
C	Noun name of the item being ordered.
2	The routing identifier of the supply activity.
4 and 5	Federal stock number for the item from the Subsistence Ledger (NAVSUP Form 335) and Federal Stock Catalog.
8	Quantity desired, always use 5 digits; 0's will be entered before quantity if required as 00028.
11	The Julian date.
12	A serial number comprised of a four digit number beginning with a 9 and the three digit alpha/numerical subsistence item code.
14 and 15	Use is optional. May be used to indicate shipment to a supported activity. More commonly used with Y in block 14 and local storage area information in block 15.
17	Afloat: PZ for general mess items, QZ for combat meals, ZT for operation Deepfreeze. Ashore: VW for overseas, Alaska and Hawaii, VX for ashore in the United States except Alaska and Hawaii.
20	Priority appropriate for replenishment of consumable stores. Normally 12 afloat, 15 shore.
21	Julian required delivery date which allows for routine processing and delivery. Ships may use an earlier date when scheduled for deployment.
22	Use optional. May be used to indicate "Do not substitute".

SUBSISTENCE REPORT

Each page of the Subsistence Requisition Document (NAVSUP Form 1059A (Perishable-Frozen), 3 pages, NAVSUP Form 1059B (Perishable-Chill), 3 pages, and NAVSUP Form 1059C (Perishable-Frozen/Chill), blank page) may be used alone as a requisition for perishable food items or any combination of pages may be used, depending on the needs of the requisitioner. Each item ordered is automatically assigned a four digit serial number comprised of the "9" preprinted in the "DOCUMENT NO." block of the NAVSUP Forms 1059A, B and C along with the preprinted subsistence item code contained in the "CODE/SERIAL" column.

The stock point has the option of processing each item as a separate requisition or using the

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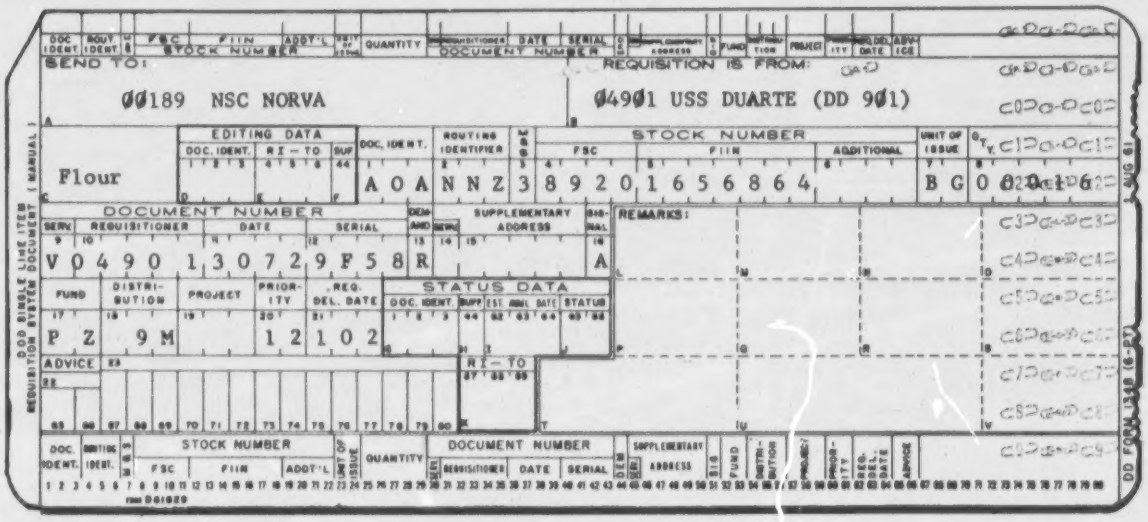
SEND TO:
00189 NSC NORVA
REQUISITION IS FROM:
04901 USS DUARTE (DD 901)
Flour
A O A
N N Z
3 8 9 2 0 1 6 5 6 8 6 4
B G
V 0 4 9 0 1 3 0 7 2 9 F 5 8 R
A
P Z
9 M
1 2 1 0 2
REMARKS:
DD FORM 1348 (6-PT)

43.24

Figure 5-7.—DD Form 1348.

first subsistence item code, under the heading of "Code/Serial", used on each page as a reference and processing each page as a multiline requisition. When processed as a multiline requisition, the first subsistence item code being requisitioned is circled to indicate that it has been used as a reference number. When only a few items are required, it is recommended that the blank page 7 of NAVSUP Form 1059C be used as the requisition. See figure 5-8.

Preparing Subsistence Requisition Document

The NAVSUP Forms 1059A, B and C are prepared as follows:

1. The name of the requisitioning activity is inserted in the "FROM" block.
2. The name of the supply support activity is inserted in the "TO" block.
3. The routing identifier code of the supply support activity is entered in the "ROUT-ID" block.
4. In the "DOCUMENT NO." block, the following are entered:

   N, R or V, as appropriate:
   the unit identification code (formerly the accounting number) of the requisitioning activity;
   the julian date;
   the serial number consisting of the preprinted "9" followed by the three digit subsistence item code of each line item ordered, completes the document number.

5. Use of the "SUPPLEMENTARY ADDRESS" block is optional.
6. The "FUND CODE" is a mandatory entry.
7. The "PROJECT" block usually is left blank, but may be used.
8. The "PRIORITY" usually is that applicable to the requisitioning activity for routine replenishment of consumable supplies.
9. The required delivery date is realistic and shall provide adequate time for routine processing and delivery.
10. Use of the "ADVICE" column is optional.
11. The quantity required is inserted in the "QUANTITY REQ'D" column.

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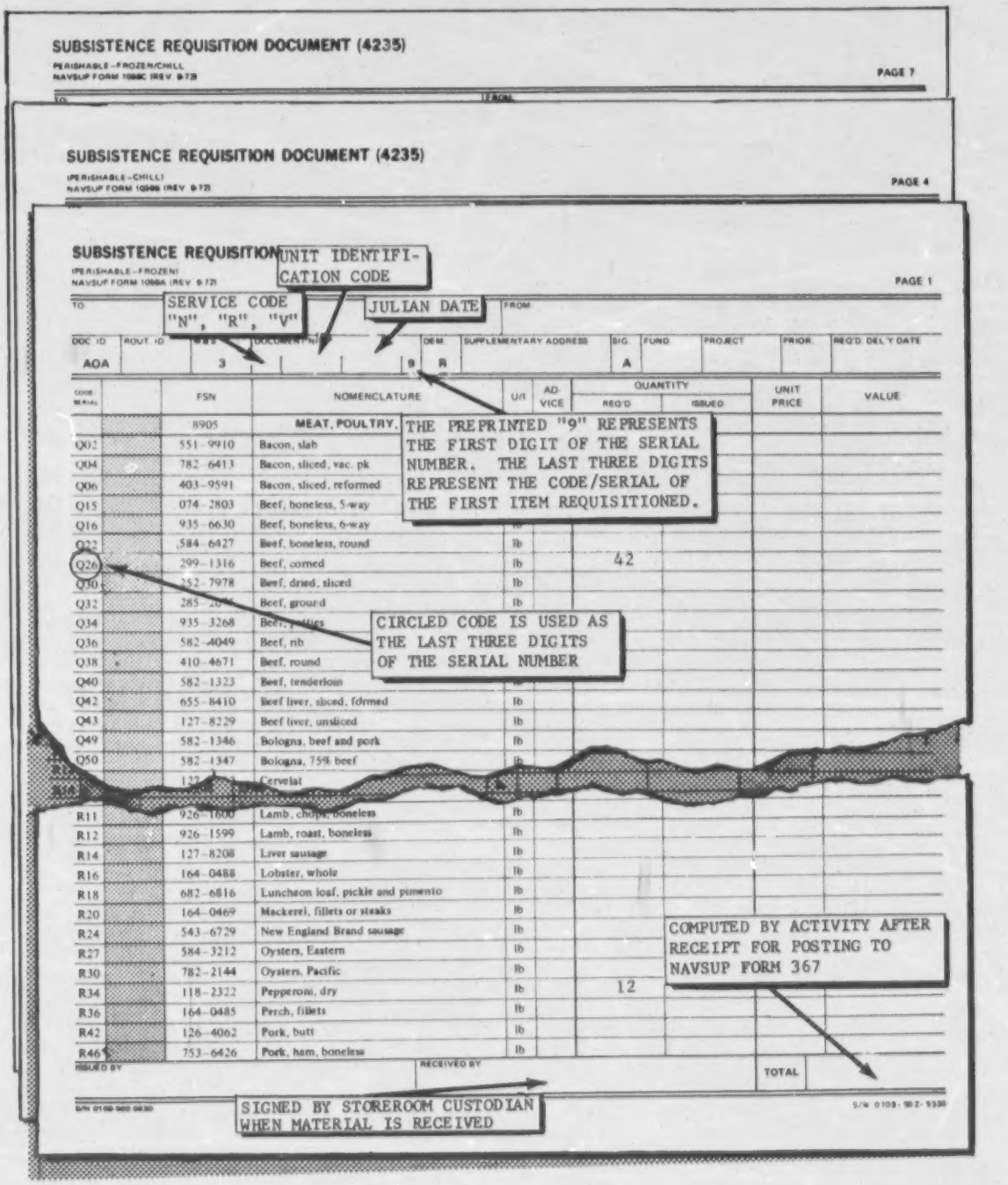

SUBSISTENCE REQUISITION DOCUMENT (4235)
PERISHABLE – FROZEN/CHILL
NAVSUP FORM 1088C (REV. 9-73)
PAGE 7
SUBSISTENCE REQUISITION DOCUMENT (4235)
(PERISHABLE – CHILL)
NAVSUP FORM 1088B (REV. 9-73)
PAGE 4
SUBSISTENCE REQUISITION
(PERISHABLE – FROZEN)
NAVSUP FORM 1088A (REV. 9-73)
PAGE 1
UNIT IDENTIFICATION CODE
SERVICE CODE "N", "R", "V"
JULIAN DATE
TO
FROM
DOC. ID
ROUT. ID
DOCUMENT NO.
DEM.
SUPPLEMENTARY ADDRESS
SIG.
FUND
PROJECT
PRIOR.
REQ'D. DEL'Y DATE
AOA
3
9
R
A
CODE SERIAL
FSN
NOMENCLATURE
U/I
AD VICE
QUANTITY
REQ'D
ISSUED
UNIT PRICE
VALUE
8905
MEAT, POULTRY,
THE PREPRINTED "9" REPRESENTS THE FIRST DIGIT OF THE SERIAL NUMBER. THE LAST THREE DIGITS REPRESENT THE CODE/SERIAL OF THE FIRST ITEM REQUISITIONED.
Q02 551-9910 Bacon, slab lb
Q04 782-6413 Bacon, sliced, vac. pk lb
Q06 403-9591 Bacon, sliced, reformed lb
Q15 074-2803 Beef, boneless, 5-way lb
Q16 935-6630 Beef, boneless, 6-way lb
Q22 584-6427 Beef, boneless, round lb
Q26 299-1316 Beef, corned lb 42
Q30 252-7978 Beef, dried, sliced lb
Q32 285-2[illegible] Beef, ground lb
Q34 935-3268 Beef, patties lb
CIRCLED CODE IS USED AS THE LAST THREE DIGITS OF THE SERIAL NUMBER
Q36 582-4049 Beef, rib lb
Q38 410-4671 Beef, round lb
Q40 582-1323 Beef, tenderloin lb
Q42 655-8410 Beef liver, sliced, fdrmed lb
Q43 127-8229 Beef liver, unsliced lb
Q49 582-1346 Bologna, beef and pork lb
Q50 582-1347 Bologna, 75% beef lb
[illegible] 127-[illegible] Cervelat lb
R11 926-1600 Lamb, chops, boneless lb
R12 926-1599 Lamb, roast, boneless lb
R14 127-8208 Liver sausage lb
R16 164-0488 Lobster, whole lb
R18 682-6816 Luncheon loaf, pickle and pimento lb
R20 164-0469 Mackerel, fillets or steaks lb
R24 543-6729 New England Brand sausage lb
R27 584-3212 Oysters, Eastern lb
R30 782-2144 Oysters, Pacific lb
R34 118-2322 Pepperoni, dry lb 12
R36 164-0485 Perch, fillets lb
R42 126-4062 Pork, butt lb
R46 753-6426 Pork, ham, boneless lb
COMPUTED BY ACTIVITY AFTER RECEIPT FOR POSTING TO NAVSUP FORM 367
ISSUED BY
RECEIVED BY
TOTAL
SIGNED BY STOREROOM CUSTODIAN WHEN MATERIAL IS RECEIVED
S/N 0108-902-5330

43.23

Figure 5-8.–Requisition for perishable Food Items.

An original and five copies of the NAVSUP Form 1059A, B and C are prepared. The original and four copies are submitted to the supply activity.

Supply Action

The supply activity enters the "Quantity issued", Unit price" and "Value" on the NAVSUP Form 1059A, B and C for each item requisitioned. If desired, local procedures may be adjusted to permit handling the NAVSUP Forms 1059A, B and C only as requisitions, and separate material release or issue documents may be prepared by the supply activity. When used as a multiline item requisition requiring more than one page, each page is handled as a separate requisition, using the first subsistence item code used on the page as a reference number. Page 7, NAVSUP Form 1059C is used by the supply activity to make corrections and substitutions. When so used the basic requisition is annotated: "See Page 7, code_____." in the "Issued", "Unit price", and "Value" columns opposite the appropriate item.

Use of Page 7 of NAVSUP Form 1059

Page 7 of the NAVSUP Form 1059C is used by the requisitioner to request additional items not listed on pages 1 through 6 of NAVSUP Form 1059A and B. Contract items ordered from a supply point are requisitioned on page 5 (containing most of the perishable chill contract items) of NAVSUP Form 1059B, or are listed on a separate Page 7, NAVSUP Form 1059C. By either method, the first line is clearly annotated "Contract Items". Page 7 also is used to prepare requisitions when only a few listed items are required. Separate pages are used for perishable/chill and for perishable/frozen items to facilitate handling by the supply activity.

PURCHASE

When it is not possible to procure food items from the normal sources of supply, they may be purchased under existing shore contracts or in the open market. In general, contract bulletins and local regulations should furnish you with the necessary information concerning commercial sources of supply.

Contract bulletins issued by Navy purchasing activities are the official source to determine that the contract under which an order is to be placed: (1) is in existence and covers the specific product required; and (2) provides for delivery at the particular port or area where delivery is requested.

Do not rely upon pamphlets or lists furnished by suppliers since they may contain errors. If you place orders based upon information contained in these pamphlets, without verification against contract bulletins, they may result in the unauthorized placement of orders or disallowance of payment by the Navy Regional Finance Center.

The following paragraphs discuss general purchase regulations, purchase under existing shore contracts, open market purchase, and the actual preparation of an Order and Inspection Report (NavSup Form 48).

GENERAL PURCHASE REGULATIONS

The following rules apply to all purchases of food items.

1. Food items authorized for use by your ship or station may be purchased under monthly, quarterly, or annual contracts, if the items cannot be furnished from a normal source of supply.
2. The Department of Agriculture controls the entry into the United States of certain foreign grown fruits, vegetables, and meats by absolute quarantine. Therefore, in the procurement of meats, fruits, and vegetables in foreign waters, only such quantities should be taken on board as will be consumed completely before arrival in home waters. Inform the senior medical department representative when any purchase is contemplated.
3. Do not order for use in the general mess any brand name article, food substitute, or other item on which competition is restricted.

4. Order perishable food items well in advance of the time set for sailing. You may need the additional time to replace items which are not in accordance with specifications.

5. Use to capacity the bakery facilities and equipment of your ship or station. Keep purchases of commercial bakery products to a minimum.

6. Do not purchase butter substitutes or adulterants for use in the general mess.

PURCHASE UNDER EXISTING SHORE CONTRACTS

When you are purchasing food items which ordinarily are not in stock at the normal sources of supply ashore, such items should be procured by the supply officer of the shore supply activity with whom the requisition was placed.

The Order and Inspection Report (NavSup Form 48) should be used when you are purchasing under an existing indefinite delivery contract. See figure 5-9. When you are preparing the NavSup Form 48, make sure that the contract number is clearly indicated in the proper place on the order form. The supply officer should sign the form.

The food service officer should keep two completed receipt copies of all orders for deliveries of food items under lock and key until the bills to which they pertain have been received.

LOCAL PURCHASE

Local purchases for ashore general messes are authorized only through local supply support activities. Activities afloat normally may not purchase food items from commercial sources for general mess use. If food requirements cannot be obtained from regular supply sources; i.e., local supply activity, indefinite delivery contract, transfers from other military services or from ships stores, local purchases may be made by the supply officer, subject to limitations imposed by the senior officer present, of approved items providing:

- there is an immediate need and urgent requirement for authorized supplies or services;
- the supplies or services are not available at the local supply support activity; and
- time is of the essence and scheduled operations may not permit procurement through Navy shore based purchasing activities.

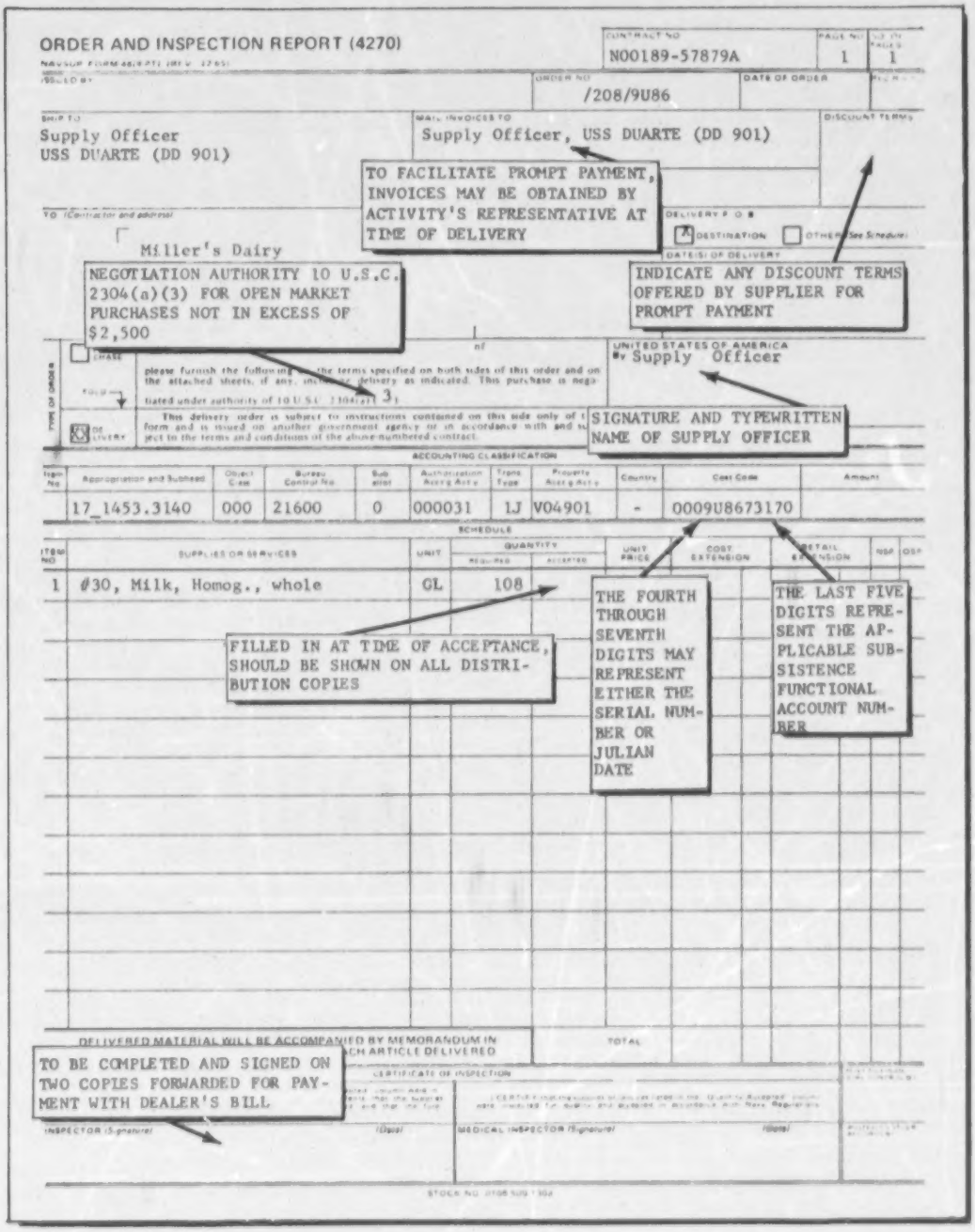
PREPARATION OF NAVSUP FORM 48

When preparing a NAVSUP Form 48, make sure that all the captions are filled in correctly and verify against contract bulletins prior to placing orders.

Instructions for preparing NAVSUP Form 48 are outlined below:

Caption	Explanation
Contract No.	"N" indicates Navy. "00189" is the unit identification code of the Naval Supply Center, Norfolk, the contracting agency. "57879A" is the number assigned to this contract by NSC. Norfolk.
Page No.; No. of Pages	Self-explanatory
Issued by	Self-explanatory
Date of Order	Self-explanatory
Order No.	A number in the regular MILSTRIP format (four digit number comprised of a "9" and the three digit subsistence item code.)
Ship to	Location
Mail invoices to	Billing is by mail; this is a mailing address.

BEST COPY AVAILABLE



32.23

Figure 5-9.—Order and Inspection Report (NAVSUP Form 48).

Caption	Explanation
Payment may be made by	The activity which makes the payment to the vendor.
To	The vendor with whom the purchase department has placed the contract.
Date(s) of Delivery	Self-explanatory
Discount Terms	The bill must be paid within the time specified in the contract bulletin.
Type of Order	For all order under contract, "Delivery" in this block must always be checked. When the purchase is an authorized local purchase in the open market (not in excess of $2,500), the "Purchase" block is checked and the numeral "3" is inserted in the negotiation authority block.
By	Name and rank, and signature of the supply officer or his authorized representative will be typed.
Accounting Classification	The information necessary to inform the paying Navy regional finance center of the accounts to be charged for the purchase.
Appropriation and Subhead.	17-1453.3140
Object Class	000
Bureau Control No.	21600
Sub-allot	0
Authorization Acct'g Act'y	000031
Trans. Type	1J
Property Acct'g Act'y	Activity Unit Identification Code
Cost Code	Twelve digit number (the fourth through seventh digits may represent either the serial number or julian date; the last five digits represent the applicable functional account number, e.g., 0009U8673170) Purchase of food items are chargeable to Military Personnel Navy, functional accounts are: 73110–Ashore CONUS 73160–Ashore outside CONUS 73170–Afloat
Schedule	The identification of the item. Describe the items using the nomenclature, unit of issue and unit price given in the contract bulletin. Number the items.

DEALER'S INVOICES

When the dealer's invoices have not been received by your ship or station, your subsistence officer should originate an inquiry 10 days (ship) or 30 days (shore) after receipt of the material, if the purchase authority indicates that the dealer's invoices are to be submitted to your ship or station: A dealer's invoice should not be received when fast pay procedures are used or

when receipt and inspection are accomplished by another activity.

Before your ship leaves a foreign port, your food service officer prepares and submits for payment all public vouchers covering dealers' invoices for food items from foreign vendors. If payment of dealers' invoices cannot be made before the ship leaves port, all such invoices, properly certified are forwarded to the nearest disbursing officer for payment. However, if there is no supply officer with disbursing facilities in the immediate vicinity, arrangements are made with the local naval attache, naval observer or consular officer to whom the supply officer gives at least three copies of the purchase order certified as to receipt and inspection of the supplies or services. If no such arrangements can be made, dealers are informed that payment is delayed because of the sailing of the ship, but that payment will be made promptly upon receipt of the invoices.

Dealer's invoices offering discounts upon payment within the discount period are processed immediately after material is received and forwarded to the Navy regional finance center designated in the purchase document for preparation and payment of public vouchers. When the dealer's invoice is not forwarded within the discount period because of a fault of the dealer, an explanation may be made on a copy of the dealer's invoice or the inspection report, whichever is utilized for certification of receipt of the material.

Dealer's invoices not subject to discount are forwarded to the appropriate Navy regional finance center within 10 days from the date of receipt of material or the dealer's invoice, whichever is later.

Payment of invoices received from a dealer not located in an area served by a Navy regional finance center is made by the disbursing officer of the receiving ship or activity. If a disbursing officer is not available, payment can be made by the nearest of the following:

- military disbursing officer
- United States disbursing officer (usually assigned to a United States Embassy)
- nearest Navy regional finance center.

All Canadian dealer's invoices are forwarded to the Navy Regional Finance Center, Washington, D.C. for payment.

TRANSFERS FROM SHIP'S STORES

Only individual size serving items; i.e., food items packaged in small containers providing one individual serving and authorized for special meals, may be transferred from ship's stores to the general mess for use in preparing special meals.

PROCUREMENT FOR PRIVATE MESSES

Any of the food items listed in the Federal Supply Catalog, Federal Supply Classification Group 89, Subsistence, as authorized for general mess use, may be requisitioned and held for ultimate slae to private messes. Items listed with restricted usage in the Federal Supply Catalog, Federal Supply Classification Group 89, Subsistence, but not authorized for general mess use, is procured only for immediate sale to a private mess. Food items not listed in the Federal Supply Catalog, Federal Supply Classification Group 89, Subsistence, may be procured for immediate sale by the supply officer, through normal supply channels, to flag and cabin messes only upon receipt of a written request. Such items may be held in stock and issued to flag and cabin messes as required during extended deployments. Food items, not authorized for general mess use and specifically requisitioned for sale only to private messes may not be returned by the private mess for credit. Requisitions (DD Form 1149) for food items not authorized for general mess use are annotated "For sale to private messes".

CHAPTER 6
RECEIPT, INSPECTION, AND STOWAGE

Whatever you procure must be receipted, inspected, and stowed. Points discussed in this chapter will help you accomplish this efficiently and safely. Prior planning and preparation will eliminate confusion, disorganized storage spaces, and the resultant survey of spoiled food items.

This chapter is intended to help you find the answers to such questions as:

- What should I do with unsatisfactory food items?
- What are my duties in connection with underway replenishment?
- Where in the freeze box should pork, veal, lamb, poultry, and fish be stowed?

RECEIPT AND INSPECTION

When food items are delivered aboard your ship or station, you, as the senior Commissaryman, will be responsible for receiving them, inspecting them, and processing the receipt documents.

PLANNING FOR RECEIPTS

First estimate how many men you will need and arrange for a working party. Put this information on a memorandum to cover the entire period the working party will be needed. The next thing to do is have it approved by the food service officer, who will ask the executive officer to designate the divisions that will furnish the men for your working party. (This listing of divisions, with the number of men required from each may be included in the plan of the day.) Obviously the information should be in the executive officer's office as far in advance as possible so that the workload of other divisions may be planned accordingly.

After you have arranged for a working party and before the food items are scheduled to arrive, inspect the refrigerated spaces and dry storerooms for cleanliness and space available. Draw up a rough loading plan for each space. The rough plan should be based on the general mess menu. Those food items which will be needed for the first 4 or 5 days should be stored last. Copies of the rough plan should be given to the Storekeeper or the Commissaryman in charge of loading because he will need to know where you want the items stored.

Each place of storage must be clean and ready to receive stores prior to the day food items are to be loaded. Old stocks must be moved or arranged so that new stock will not be stacked in front and issued first. Check all equipment such as rollers, pallet boards, slings, and dunnage. Notify the first lieutenant or senior deck division petty officer that certain hatches must be opened and winch operators will be required for the periods of loading food items. Do not wait until the stores are alongside before notifying the command.

Delays are costly, and may result in spoilage of perishable food items.

TIPS ON LOADING

If you are attached to a shore activity or aboard a ship in port, it is a good idea to be at the source of supply when food items are loaded on trucks for delivery to your ship. You can offer valuable suggestions that will make it easier

to handle the items when they are unloaded. The order of loading and unloading trucks is important from the standpoint of spoilage, especially in handling refrigerated items.

In hot weather, fresh and frozen foods should be among the last items loaded into trucks, since they can then be among the first unloaded. The interval between loading trucks and getting such items into your refrigerated spaces may be several hours. In this length of time fresh items might begin to wilt and frozen items to thaw and become unfit for use. Similarly, you would not want fresh fruits, vegetables, or eggs exposed to freezing temperatures for long periods of time.

RECEIVING PROCEDURES

Almost all your receipts (for afloat activities) will be by transfer from other supply activities.

General messes ashore normally receive all food items from the supply officer except at those activities where fresh bakery and fresh dairy products are delivered direct to the general mess by vendors.

Afloat

Although the supply officer or the food service officer is responsible for the receipt of food items, you as the leading Commissaryman may be assigned this responsibility.

When you have been assigned this job, make sure that:

1. Food items delivered are brought on board, properly inspected, and then distributed to the proper spaces.
2. Signature receipts are given for only that quantity of food items actually received.
3. Receipt documents are properly processed and turned in to the food service office.
4. Dummy invoices are prepared when invoices do not accompany the items delivered.

Ashore

The quantity of subsistence delivered is checked and the delivery document is signed for the quantity accepted. The signed original document should be returned to the person making the delivery and a copy is retained for submission to the supply officer. Submissions of delivery documents to the supply officer may be made daily or at the end of each month. In either instance, the documents are covered by a Subsistence-Item Request/Issue Document (NavSup Form 1282) certifying that the quantities of items indicated were accepted.

INSPECTION PROCEDURES

Regardless of the source from which food items are obtained and regardless of any prior inspection, it may be your responsibility to inspect them as they arrive to determine that the specified quantities have been received.

A designated representative of the medical department should perform a fitness-for-human-consumption inspection upon receipt of food items that have been purchased on the local market or under contracts which require inspection at destination. The receipt document showing that this inspection has been performed must be signed by the medical representative. Items about which there is any doubt as to fitness must not be accepted. Receipts from Navy sources and other Government departments have been inspected, and additional inspection by the medical department is not required. Inspections required on receipts from these sources should be performed by you, as the food service officer's representative.

Inspection for Quantity

When food items are delivered, you must check them for quantity. If the shipment is from a Naval activity it is safe to accept the standard weights stamped on the boxes. All items from private vendors, however, should be weighed or counted and actual amounts received entered on the delivery tickets. Check scales for accuracy prior to use. Boneless meats and cheese generally are received on an average case weight basis. Actual quantities indicated on the case should be checked to ensure that the actual case weights do not vary more than 3 pounds from

the average case weights indicated on the invoice. Report any major differences to the food service officer immediately.

Substitutions

Occasionally the Defense Personnel Support Center (DPSC) will issue substitutes for items that have been requisitioned. This is done for semiperishable items that have alternate varieties or types of pack. The original item may no longer be available, or the substitute item may be overstocked, resulting in a decision to suspend procurement of the original item until the excess alternate stock is depleted.

These items are identified by DPSC as "mandatory" and "possible" substitution items. "Mandatory" and "possible" substitution items are listed in the *Subsistence Requisitioners' Handbook*.

The Fleet Material Support Office (FMSO) obtains from DPSC semiannually or as otherwise updated by DPSC, lists of current "mandatory" and "possible" substitution items. These are published to all ships and to shore activities which do not hold the DPSC *Subsistence Requisitioners' Handbook*.

When requisitioning food items, make required substitutions as outlined in chapter 5.

Inspection for Quality

Food items may be fit for human consumption but still vary considerably in other aspects of quality. The food service officer aboard your ship is one of the people responsible to see that the Navy receives the quality it contracted for. It is true that most items are inspected at the issuing activity, but this does not relieve you of responsibility for checking the items your ship receives. Do not open every case or box; this only delays loading operations.

Pick out random cases and inspect them in a separate area. When necessary, notify the medical department if there is doubt as to the condition of an item. Refer to *Commissaryman 3&2*, NAVPERS 10279-E, chapter 3, for information on quality inspection of food items.

If you feel that some food items are unsatisfactory (poor quality, poor condition, not up to procurement specifications) report this information on a DD Form 1608 (Unsatisfactory Material Report (Subsistence)). Here is an example. You suspect excess fat in ground beef. Contact the nearest Preventive Medicine Unit or Army/Air Force Veterinarian and request that they take samples for a laboratory analysis. Fill out and forward the DD Form 1608 to the Navy Subsistence Office. Attach a copy of the laboratory report if it is available. (Your report will go to the Defense Personnel Support Center, Philadelphia for investigation and corrective action.)

UNSATISFACTORY FOOD ITEMS

Report immediately any Government owned food items that are found to be unsatisfactory during an inspection or in use.

Nonhazardous Items

Nonhazardous items are those items which do not meet expected or desired standards but which do not constitute a danger to personnel if consumed. Use of items in the nonhazardous, unsatisfactory food category will be determined by your food service officer. Prepare an unsatisfactory Material Report (Subsistence) (DD Form 1608) (see fig. 6-1 and 6-1A) in accordance with the instructions on the back of the form and submit an original and two copies to the Navy Subsistence Office. Whenever possible, forward photographs to illustrate discrepancies. Examples of nonhazardous unsatisfactory food items are:

- chicken wings in a box labeled breasts,
- grill steaks containing so large an amount of fat and gristle as to be tough and unappetizing,
- packaging which does not adequately contain the product (too flimsy, leaks easily, inadequate protection, not a convenient size),
- deviations in case weights.

UNSATISFACTORY MATERIAL REPORT (SUBSISTENCE)	SEE INSTRUCTIONS ON REVERSE SIDE	1. DATE PREPARED	REPORT CONTROL SYMBOL DD-DSA(AR) 1619

2. TO (Include ZIP Code):	3. FROM (Originating activity, address and ZIP Code):
Commanding Officer Navy Subsistence Office Washington, D. C. 20390	USNMCB-40 Davisville, R. I. 02819

4. ITEM NOMENCLATURE
Hot Sauce, Type II Regular

5. FEDERAL STOCK NUMBER	6. SPECIFICATION NUMBER/BRAND NAME CONTRACT
8950-926-9939	Unknown

7. CONTRACTOR, PLANT ADDRESS AND ZIP CODE	8. SOURCE OF SHIPMENT (Depot, Distribution Point, Direct Delivery, etc.)
XYZ Vinegar Co. New York, New York	Naval Supply Center Charleston, S. C.

9. DATE SUPPLIES RECEIVED	10. REQUISITION NUMBER

11. CONTRACT NUMBER	12. SIZE OF LOT OR SHIPMENT (Cases and Units)	13. LOT OR SHIPMENT NUMBER	14. DATE OF PACK
DSA 130-7-C-291A3	10 cases (48-6 oz. bottles	Lot #4 Code D	March 1965

15. SAMPLING PLAN

INSPECTION LEVEL	TEST/EXAMINATION TYPE OR NUMBER	SAMPLE SIZE	AQL	ACCEPTANCE NUMBER	REJECTION NUMBER	NUMBER OF DEFECTS OR DEFECTIVES	SAMPLE UNIT

16. DESCRIPTION FOR DRAWING SAMPLE
Random sample- 10%

17. NARRATIVE DESCRIPTION OF UNSATISFACTORY QUALITY AND IDENTIFICATION OF DEFECTS
Product is weak tasting, little flavor, thin, watery appearance. Solids and liquid in product have separated and do not mix. Approximately 2/3 bottles with rusted caps. See attached photograph.

18. RECOMMENDATIONS
Product has been surveyed. Recommend that old age stocks not be issued to ships.

19. TYPED NAME, GRADE AND TITLE	19A. SIGNATURE
FOOD SERVICE OFFICER	

(TO BE COMPLETED BY SERVICE OFFICE)

20. TO:	21. FROM (Service Office):
Commander Defense Personnel Support Center ATTN: DPSC-STQP 2800 South 20th Street Philadelphia, Pa. 19101	

22. Forwarded for appropriate action.

23. TYPED NAME AND TITLE	23A. SIGNATURE	23B. DATE

DD FORM 1 MAR 71 1608 PREVIOUS EDITIONS ARE OBSOLETE S/N 0102-014-7003

90.52.1

Figure 6-1.—Unsatisfactory material report (subsistence) DD Form 1608 (front).

INSTRUCTIONS

GENERAL. This form should be used to report all unsatisfactory conditions in all subsistence items procured by the Defense Personnel Support Center and is not limited to those in nonconformance with specification requirements. When unsatisfactory conditions are not related to specification requirements, special attention should be given to Item 17. Photographs are an excellent method for illustrating the exact nature of many discrepancies. Inspection and testing records should be forwarded with the UMR when appropriate. Use additional sheet as necessary and identify with related item number. Item discrepancies in shipments requiring submission of DD Form 1599, Report of Item Discrepancy; Standard Form 361, Discrepancy in Shipment; or DD Form 6, Report of Packaging and Handling Deficiency, will not be reported on this form. The use of the Report Control Symbol is optional and at the discretion of each service.

ITEM 4 - State nomenclature in sufficient detail to insure identity including as necessary type, grade, class, etc.

ITEM 13 - State contractor's lot number shown on shipping or unit container.

ITEM 15 - Information for these columns can be obtained from section 4 of applicable specification.

ITEM 16 - State the number or amount drawn from each case, each area *(top, bottom, side, etc.)* and whether composite sample was used.

ITEM 17 - List the manufacturer's batch or date codes *(usually shown as a series or numerals and letters printed or embossed on bottles, cartons, and cans)* found on primary containers. These codes may also be found printed or stencilled on shipping containers. Define the defect as stated in the quality assurance provisions of the commodity specification; otherwise, define the manner or degree of nonconformance. List storage conditions or other factors which may be related to the unsatisfactory conditions of the product. Forward samples of product if practicable.

ITEM 18 - State recommendations regarding disposition of supplies, revision of specification requirements, revision of purchase requirements as to size of units and quantities. It is essential to state quantities on hand and, if applicable, dates and quantities scheduled for subsequent use.

DISTRIBUTION

a. Originator will prepare original and three copies of report, retain one carbon copy and forward remainder to following appropriate Service Office.

(1) Chief
U.S. Army Food Service Center
1819 West Pershing Road
Chicago, Illinois 60609

(2) Commanding Officer
U.S. Navy Subsistence Office
Washington, D. C. 20390

(3) Air Force Service Office
Attn: DPKFD
2800 South 20th Street
Philadelphia, Pennsylvania 19101

(4) Commandant of the Marine Corps
Code COE-2
Headquarters U. S. Marine Corps
Washington, D. C, 20380

b. Service Office will review reports for completeness and validity and, if valid and complete, forward:

(1) Original for action in accordance with DSAH 4155.7/AR 700-46 paragraphs VC and VI to:

Commander
Defense Personnel Support Center
Attn: DPSC-STQP
2800 South 20th Street
Philadelphia, Pennsylvania 19101

(2) Information copy to:

Commanding General
U. S. Army Natick Laboratories
Attn: AMXRE-FS
Natick, Massachusetts 01760

90.52.2

Figure 6-1.—Unsatisfactory material report (subsistence) DD Form 1608 (back).

Hazardous Material (Obvious)

Hazardous materials (obvious) are food items that are clearly and unquestionable unfit for human consumption. Items determined by the medical officer to be in the hazardous material (obvious) category will be surveyed and disposed of. Before disposition, gather all available information, including photographs of the defects if possible. When the material is known or believed to have been received in the hazardous condition, notify the supplying activity or ship by message. A DD Form 1608 will be prepared the same way as it is for non-hazardous items. When considered necessary by the medical officer, samples of the material will be submitted for laboratory analysis to the nearest Army medical laboratory, Navy environmental and preventive medicine unit, or one of the laboratories listed in the *NAVSUP Manual.* If retention does not constitute a health or sanitary hazard, retain a number of samples until disposition is directed. Requests for laboratory testing services are made on a Requst for and Results of Tests (DD Form 1222). A copy of the laboratory report is forwarded to the Navy Subsistence Office as soon as it is available. Examples of hazardous material (obvious) are:

- contents of cans which are bulged, swollen, punctured, and so forth,
- products with spoilage indicated by offensive odors, abnormal color, presence of slime or other evidence of deterioration,
- items containing large, easily recognizable pieces of foreign material (glass, nails, insects, and so forth).

Hazardous Material (Suspected)

Hazardous material (suspected) includes:

- items believed, but not known, to constitute a danger to personnel if consumed,
- items with a potentially dangerous defect which cannot be detected by sight or odor.

Items in the hazardous material (suspected) category must be reported immediately by a priority message to the Defense Personnel Support Center, Philadelphia, with copies to

- Navy Subsistence Office,
- Bureau of Medicine and Surgery (Preventive Medicine Division and Hospital Administration Division),
- activity that supplied the material,
- Service Force Commander (if the material was received from a supply ship).

Your should suspend all issues and use of the suspected items pending receipt of instructions from DPSC. Samples of suspected items should be forwarded for laboratory analysis and copies of the laboratory report should be provided the same distribution as the priority message. To prepare a priority message, check NAVSUP P-486, ch. 4.

REJECTIONS

If you reject items, you or the supply officer must notify the purchasing officer concerned. Depending on local arrangements, either you or the purchasing officer must notify the vendor.

The purchasing officer will arrange to have the item or items inspected as to condition and liability of the carrier or vendor. Do not make any statements to the carrier or contractor. The purchasing officer or his agent will take necessary steps to settle any dispute or claim.

A separate report should be made to the purchasing officer when contractors fail to make satisfactory deliveries. The report should state whether the items rejected were replaced promptly and satisfactorily. All reports will be investigated by the purchasing officer, and he will make the necessary reports and recommendations to the Navy Subsistence Office.

POSTING RECEIPTS

There are two items of information which must be transcribed to your subsistence records. They are the quantity received and the dollar value of the receipt. Additionally, if the unit price is different from the last unit price at which you received the same item, a notation to this effect must be made on the appropriate

Subsistence Ledger. (The last receipt price is always rounded to the nearest cent when it is posted to the Subsistence Ledger.) The records affected are the Record of Receipts and Expenditures (NAVSUP Form 367) and the Subsistence Ledger (NAVSUP Form 335). Value is posted to the 367 and quantity to the 335. If the optional Stock Tally (NAVSUP Form 209) is used, quantity should be posted to it. (See fig. 6-2).

DISPOSITION OF RECEIPT DOCUMENTS

Several different receipt documents are used for food items, depending on the type of food delivered, the source from which they are received, and whether the issuing activity is mechanized or nonmechanized.

Receipts on DD Form 1348-1 or 1348

Food items normally should be received on the DOD Single Line Item Release/Receipt Document (DD Form 1348-1) except when requisitioning from nonmechanized ships or when perishable items are requisitioned. When food items are delivered from mechanized ships or shore stations, DD Form 1348-1's (the original and three copies) accompany the material. If food items were requisitioned from an afloat activity on a DD Form 1348, the green and white copies and the bottom card accompany the material. Receipt is acknowledged on the white copy of the DD Form 1348 and returned to the issuing ship.

In either case you will receive at least three copies of a DD Form 1348-1 or 1348 (the third copy of the DD Form 1348 will be your retained red copy). These copies should show the unit price at which they are issued. On board ship they should be distributed as follows:

1. One copy signed by the jack-of-the-dust acknowledging responsibility for the item listed thereon, to the food service officer. This copy should be maintained in the personal custody of the food service officer.

2. One copy, extended, to one of two files: RECEIPTS (including reefers) *DATE* to *DATE* or RECEIPTS FROM OTHER NAVY SHIPS (excluding reefers) *DATE* to *DATE*. These files will substantiate your ship's subsistence returns at the end of the accounting period.

3. Any remaining copies to the requisition file where they will be attached to the OUTSTANDING REQUISTIONS (red) copy which should be annotated to acknowledge receipt and removed to a COMPLETED REQUISITION file.

See figure 6-3 for distribution of DD Form 1348-1.

Receipts on NAVSUP Form 1059

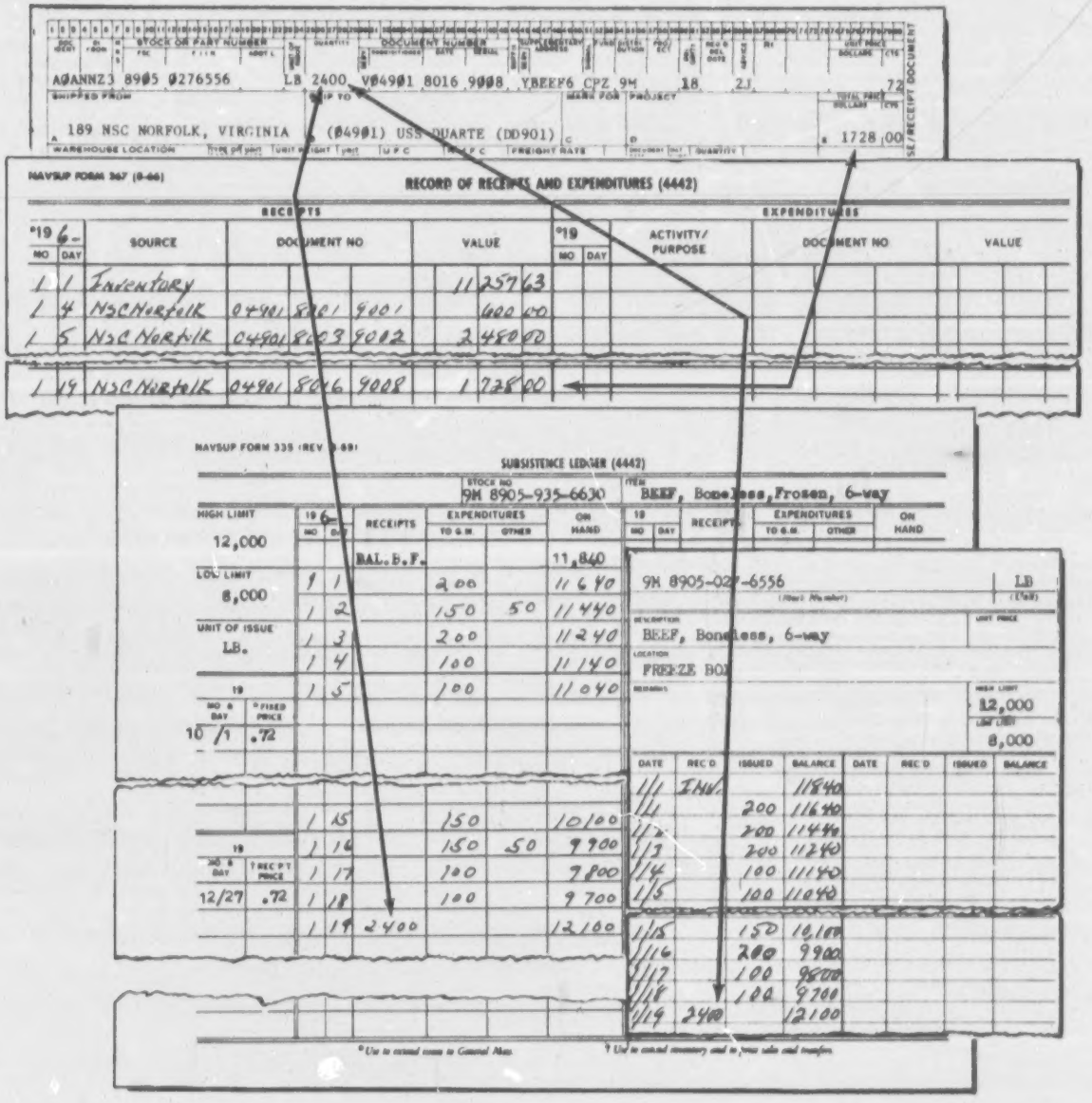
Each page of the Subsistence Report–multiuse (Perishable) (NAVSUP Form 1059) may be used alone as a requisition for perishable food items or any combination of pages may be used, depending on your needs. Like the DD Form 1348, it can also be used as a receipt document. Copies of the NAVSUP Form 1059 received with the requested subsistence material should be handled in a manner similar to the forms discussed above.

Receipts on NAVSUP Form 48

Orders under contract or purchase orders should be handled in a manner similar to the procedures described for forms 1348-1 and 1348. Three copies of the NavSup Form 48 should be distributed to the (1) supply officer's file, (2) the quarterly RECEIPTS file, and (3) the remaining copies to the COMPLETED PURCHASE ORDER file (see fig. 6-4). A difference is that you have had these receipt copies of the NAVSUP Form 48 aboard since it was prepared.

When the food items arrive, remove three (or more) copies of the 48 from the outstanding purchase order file, and from this point on you can consider that they arrived with the food items. After completion of the quality and quantity inspection you can extend your posting copy after filling in the quantity accepted column with your actual count of the material

BEST COPY AVAILABLE



43.24-1

Figure 6-2.—Posting a 1348-1 to stock and financial records.

received. There is an exception when you order subsistence for delivery over an extended period. When this is the case, the tickets from each delivery are filed in the accountability file, and the amount of each delivery is noted by the office Storekeeper on the outstanding purchase order file copy of the NAVSUP Form 48. When final delivery is made, you proceed with the distribution of copies as discussed above.

When the delivery is complete, you sign the certification in the lower left corner of a copy of the NAVSUP Form 48 which is then

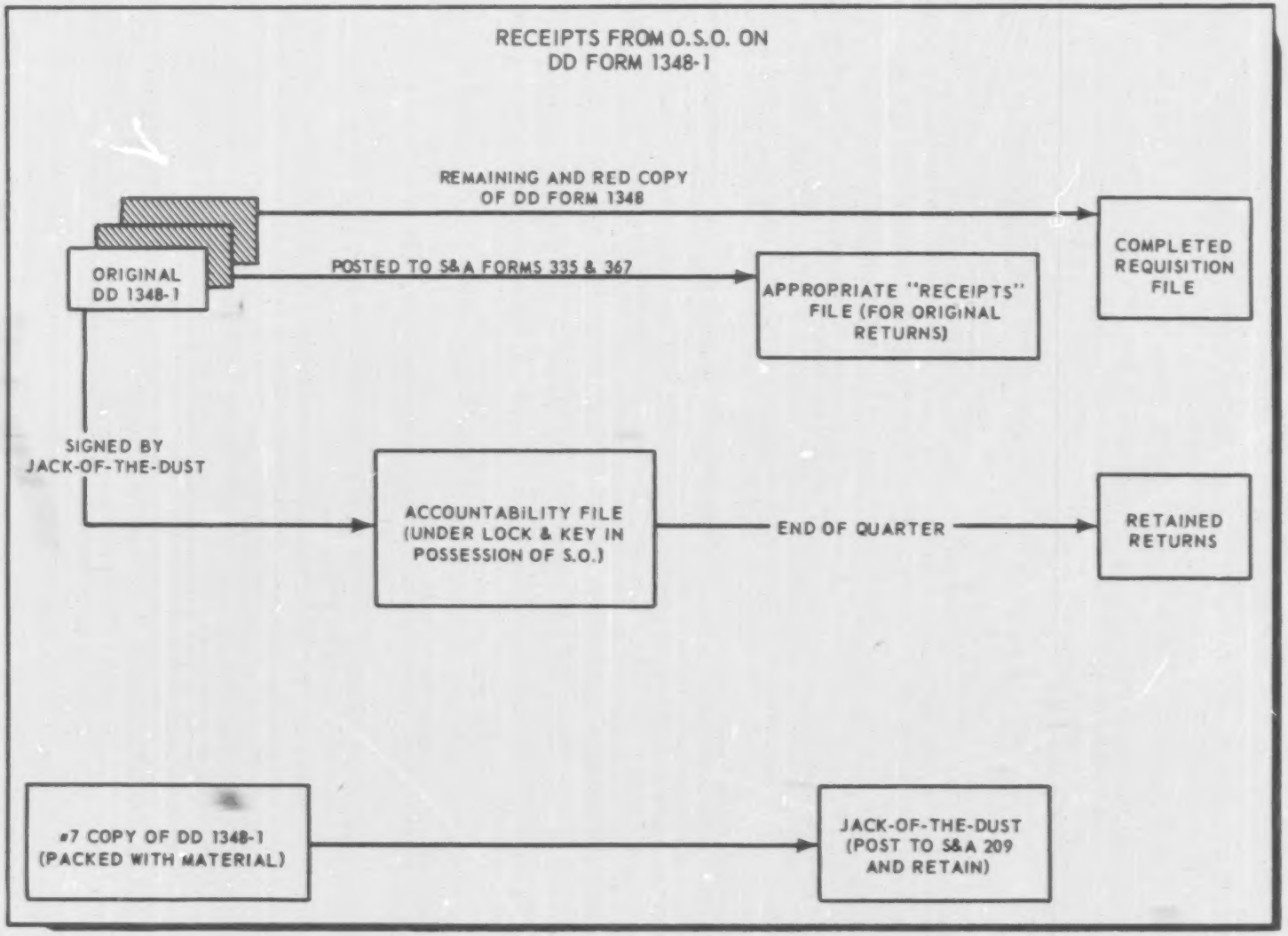
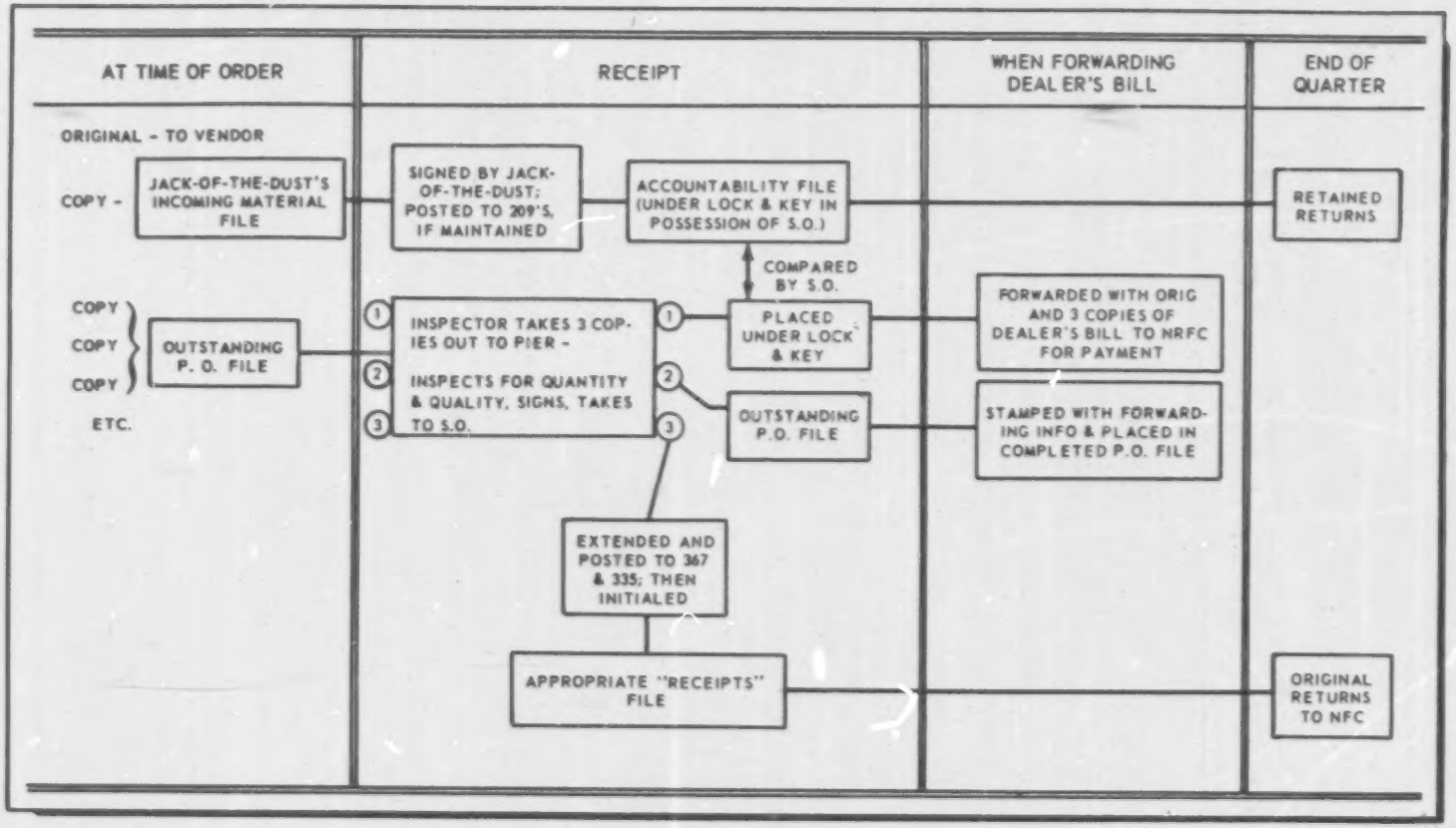


Figure 6-3.—Distribution of DD 1348-1 copies upon receipt of material.


AT TIME OF ORDER
RECEIPT
WHEN FORWARDING DEALER'S BILL
END OF QUARTER
ORIGINAL - TO VENDOR
COPY -
JACK-OF-THE-DUST'S INCOMING MATERIAL FILE
SIGNED BY JACK-OF-THE-DUST; POSTED TO 209'S, IF MAINTAINED
ACCOUNTABILITY FILE (UNDER LOCK & KEY IN POSSESSION OF S.O.)
RETAINED RETURNS
COMPARED BY S.O.
COPY
COPY
COPY
ETC.
OUTSTANDING P. O. FILE
1
2
3
INSPECTOR TAKES 3 COPIES OUT TO PIER -
INSPECTS FOR QUANTITY & QUALITY, SIGNS, TAKES TO S.O.
1
PLACED UNDER LOCK & KEY
FORWARDED WITH ORIG AND 3 COPIES OF DEALER'S BILL TO NRFC FOR PAYMENT
2
OUTSTANDING P.O. FILE
STAMPED WITH FORWARDING INFO & PLACED IN COMPLETED P.O. FILE
3
EXTENDED AND POSTED TO 367 & 335; THEN INITIALED
APPROPRIATE "RECEIPTS" FILE
ORIGINAL RETURNS TO NFC

43.23(90E)

Figure 6-4.—Distribution of Form 48 copies upon receipt of material.

forwarded, with the original and three copies of the dealer's bill, to the paying office designated on the form.

DISCREPANCIES IN DOCUMENTATION

One of your responsibilities is to compare the food items received with the accompanying documents and, if they do not agree, to take appropriate action. The following paragraphs discuss situations you may encounter and the proper procedures in each case.

Erroneous Invoices

When an invoice is received containing an error of $5 or more, request a corrected or credit invoice from the issuing activity. Line through the error without obliterating the figures and insert the correct amount and post it to the Record of Receipts and Expenditures (NAVSUP Form 367). Upon receipt, file the corrected or credit invoice with the retained records. Errors of less than $5 should be absorbed in the price adjustment.

Receipts Without Invoices

When food items are received without invoices or on unpriced invoices, prepare a dummy invoice and take up the food items at the last receipt price as shown on the NAVSUP Form 335. When the priced invoice for the food items is received, round off the receipt unit price to the nearest cent and use it as the unit price for the item. Make a cross reference on the priced invoice to the related dummy invoice and, if required, make an additional line entry on the NAVSUP Form 367 for any difference.

Shortage in Shipment

When shortages are found in shipments received from other supply officers, the full value of the transfer invoice should be taken up on the stock records and the loss, regardless of the amount, should be surveyed in the regular manner. If the missing items are received later, a credit loss by survey invoice is processed.

UNDERWAY REPLENISHMENT

Underway replenishment is a major task. However, this task may be simplified somewhat by careful planning and supervision on your part.

The underway replenishment bill is a part of your Ship's Orders and Regulations. Compare this bill with others that you have used. If the bill can be improved, discuss your recommended changes with your superior.

If your ship is attached to an operating force, it will receive most of its support from mobile logistic support groups (AFs).

Listed below are some major points that you should consider when planning underway replenishment:

1. Submit your requisition to the AF within the time limits listed in replenishment guides. This gives the AF ample time to process the requisitions.

2. Be sure you are ready for replenishment when the time comes by accomplishing the following:

- Know the replenishment stations.
- Determine the number of cases that will come aboard, how many men will be required as checkers, and how many men will be needed in the working party.
- Be sure that all storerooms are ready to receive the stores. This may require stock rotation and storeroom cleanup by the bulk storeroom storekeeper
- Plan the traffic routes for the working party to take. (Be sure to indicate a separate route for return from the store rooms to avoid congestion and confusion.)
- The CO and XO should be informed of the plans for the replenishment.

3. Make sure the working party and the checkers are on location before replenishment begins.

4. Be sure that the checkers have a system for checking all actual quantities of food items that come aboard.

5. Be sure that the working party stays on the job until all food items are received aboard and struck below in the proper storerooms.

6. Be sure that the checkers know where all items are to be sent for stowage. The checkers, in most cases, are Commisarrymen.

7. Take necessary precautions to see that items such as fresh fruits are not pilfered during the stowing operation. After the replenishment is completed, you can set aside a few cases of fresh fruit for the working party. You then can charge this off to the general mess as stores consumed.

UNLOADING AND STORING

Whe loads of food items arrive for inport replenishment, offload only one type of food at a time. This makes inspection and quantity checks easier. Do not permit the working party to throw boxes or drop them off trucks. Bruised fruit, dented tinned items, and broken cases increase spoilage.

STOWING ITEMS IN REFRIGERATED SPACES

Since most refrigerated spaces do not have battens to keep stock from shifting, it is a good idea to place boards vertically on the ends of case rows and secure them to bulkhead brackets. Be careful never to secure anything to the exposed coils in a refrigerated space.

Naturally, the temperatures will rise during loading. It will take several hours to bring them back down to desired levels, and it is your job to ensure that each space is checked at least every hour. If temperatures do not drop, notify the man in charge of the refrigeration system. It may be necessary also to restow the space for better circulation of air.

STOWING FROZEN MEAT

Frozen meats, fish, and poultry should be neatly stacked in the refrigerated spaces at 0°F or lower. Meat items should not be stored on the bare deck; pallets should be placed on the deck to allow free circulation of air under all items stored in the space. Unlike preservation by canning, freezing does not sterilize food and for this reasons food items should remain in storage at 0°F or lower, to maintain the same state of sanitation and the best quality captured at the time of initial freezing. When exposed at temperatures above 0°F, the quality of frozen food decreases at a rate directly related to the temperature increases. Frozen poultry, for example, loses quality two to three times faster at 10°F than at 0°F; four to six times faster at 20°F than at 0°F. When frozen food is held for any long period of time above 0°F, permanent damage occurs and quality loss cannot be recaptured.

Check the freeze box continually to maintain temperatures at 0°F or below, if possible. Double check portable type freeze boxes assigned to you when your ship is undergoing repairs at a shipyard. They are your responsibility not the shipyard's.

Stack like items in neat rows with labels in sight; issues and inventories can then be easily and accurately made.

Put pork, veal, lamb, poultry, and fish at the far end of the space so that the warm air from the door opening will not hit them. These items spoil faster than beef and cured products.

Place older meats where they will be issued first. Do not assume that the last meat received is the freshest. Each case is date stamped and you must check these dates when stowing so that the oldest date of pack will be in position to be issued first.

When loading to capacity, it may be necessary to open baxes of meat. Hams and pork loin are best for filling in gaps. These items are usually wrapped in small cuts and do not bruise easily. Frozen boneless meats, frozen variety meats, and sausage will be stored more satisfactorily if left in original shipping boxes.

Frozen poultry should not be used to fill gaps. It should be kept completely wrapped and in the original box. The box should be kept closed; this also applies to partially used boxes of frozen poultry.

Cured meats, such as smoked ham and bacon, can be stowed in spaces with temperatures up to

40°F. Stow smoked hams and bacon in two refrigerated areas when practical. Stow part of each in the chill box and the remainder in the freeze box to hold for later use. Unless hams and bacon are stowed where the air is circulating freely to keep the paper wrappings dry, mold will form.

STORAGE TABLES

The NAVSUP PUB. 486 contains detailed storage data for perishable subsistence and dry subsistence (semiperishable). The approximate storage life of each item in these storage tables is based on optimum (most favorable) temperatures and humidities, which exist only under storage conditions ashore at large supply installations.

Aboard ship, optimum temperatures and humidities are difficult to maintain. For this reason perishables have a shorter safe life afloat than ashore. *Commissaryman 3&2*, NAVPERS 10279-E, contains tables of safe-keeping time and storage date for semiperishable items and perishable items.

Keep in mind that the storage data for semiperishable items must be calculated from the time the items are processed. Frequently you will receive perishable items that have been in storage for 3 months or even longer. In some cases optimum temperatures have not been maintained while the product was in transit. In addition, the product will be subject to upward temperature adjustment if your refrigerated spaces cannot maintain the temperatures at which they have previously been held. All these factors tend to shorten storage life.

STOWING FRESH FRUITS AND VEGETABLES

Fresh fruit and vegetables hold best at temperatures ranging from 32° to 35° for apples to 50° to 55°F for tomatoes. Vegetables require a rather high humidity. A relative humidity of 85 to 90 percent is desirable for most fresh fruits and vegetables to reduce dehydration. A combination of high temperature and high humidity will cause vegetables to spoil rapidly.

In stowing fresh fruit and vegetables, place the most durable items (such as apples, turnips, lemons, onions, and cabbage) in the back of the box. Then work toward the front area with oranges, melons, celery, and the like, followed by the most perishable items like cucumbers and lettuce. White potatoes keep best at 40° to 50°F. If they are held at lower temperatures, be sure that they are removed to room temperatures at least 24 hours before use; otherwise they will have a sweet taste.

Consult the storage table for perishable food items in the *NAVSUP Manual* to determine which fresh fruits and vegetables may be loaded ONLY for consumption within 10 days. Excessive spoilage will be avoided if these instructions are followed.

Never stow cases of vegetables or fruit so that the bulged side is on the bottom. Place them on the flat side. Crisscross cases to aid the circulation of air, and place slats or dunnage between them. Frozen fruits and vegetables should be stowed at a temperature of 0°F or lower if you plan to hold them for more than a very short time. Good circulation is also important to keep frozen foods dry, and a forced draft type of fan or blower is best for this purpose.

STOWING EGGS

Stow eggs with special care and in an odor-free space. Egg shells, like the human skin, have pores. These will absorb odors such as those of strong cheese, onions, lemons, and oranges. Keep them stored at a temperature of 32°F. Check the humidity of the stowage space. If eggs become damp they will mold and acquire a musty taste.

STOWING SEMIPERISHABLE FOOD ITEMS

You might assume that items classified as semiperishable food items are easy to stow and care for. Actually, they require as careful handling as any other food item. They should be stowed in clean, dry, well ventilated spaces. Proper handling will help ensure their normal life.

Place all dry items on pallets or dunnage; never on deck. This allows necessary air circulation. If items are in bags, crisscross them. Stack boxes and cartons with the labels facing passageways to make issue easier and inventories more accurate.

Evaporated milk in cases should be turned every 30 to 60 days to prevent the separation of butterfat.

Never stow flour or other sacked items in a storeroom that has been freshly painted or near any item with a strong odor.

Items is glass containers should remain in their cases, stored in a dark place. Light may discolor the product.

SANITATION

Both unloading and stowage present problems of sanitation. These problems result from the areas affected and from the nature of the processes.

You must keep areas where food items are being handled as clean as possible. This is often very hard to do, especially on a dock or pier, where there is much traffic. Areas in which food items are being inspected and loaded should be free from fumes such as those from creosote, fuel oil, or fresh asphalt. Most fresh items will absorb fumes or odors and will become unfit for consumption. Do not allow food items, either fresh or dry, to remain on the piers, weather decks, or loading platforms for long periods. Exposure to weather will hasten the spoilage rate. When possible, frozen/chill items should be off loaded directly from refrigerated truck/van into the ships reefers.

STORAGE AREAS

Cleanliness of refrigerated spaces helps prevent growth of mold and decay of food stuffs. All decks, bulkheads, and deck gratings should be scrubbed clean with hot, soapy water and the spaces aired as often as practicable. Defrosting the coils when 3/16 inch of ice accumulates will increase the efficiency of the refrigeration system. A heavy layer of frost or ice on these coils may result in an overload on the compressors. Do not attempt to defrost when the refrigerated spaces are loaded.

The engineering office must be notified prior to defrosting so that refrigeration can be shut off.

Dry storerooms should be clean and free of insects and rodents. Do not attempt to spray insecticide in a storeroom where flour, sugar, or sacked items are stowed. It is a good plan to spray storerooms when stocks are low and can be moved easily to another area during the spraying and airing process.

Daily inspections of refrigerated spaces and dry storerooms are part of your job. Do more than just glance in and check a space off your list. Look for broken cases or bags, leaky cans, or strange odors. Check the ventilation, temperature, and humidity of each space. Place your hands on bulkheads to see if they are damp or hot. Sweating bulkheads increase the humidity, which causes rust to form on canned goods.

SAFETY PRECAUTIONS

The safety of the personnel loading food items is your responsibility. You may place another petty officer in charge of actually loading pallets or cargo nets, but the responsibility is still yours.

Before any loading or unloading operation, instruct the petty officers in charge in the proper ways of handling boxes, cases, or bags. Show the men in the working party how to stow a cargo net or stack a pallet board so that the material will not fall. Remind them that no one stands under a load while it is being hoisted aboard. The hatch tender must be instructed so that he will call out "heads up" when a load is nearing the hold for lowering. He must also be alert to ensure that no one is standing in a cargo net that has been emptied before he gives the signal to the winchman to hoist it out of the hold.

Check to see that the area near an open hold or hatch has been properly roped off even if you consider this the duty of the deck division. This also applies to any space where a ladder or a lifeline has been removed in the hold you are loading.

Food items must be stored to prevent damage to the ship, crew, and the items themselves. Avoid storing items on top of bins. If this is necessary, due to space limitations, then secure them with proper lashings or other means. Inspect these items frequently; lashings will be loosened by the motion of the ship.

After your ship has been loaded, inspect each space for safety. Sometimes stacks may have to be leveled off, or lashings may not be adequate. Check to see that aisles have not been blocked off thereby preventing the entry of fire parties. Check loading areas to ensure that ladders, hatch boards, lifelines, and such have been returned and rigged properly. Check for any excess trash or dirt before the storerooms are secured. Fires normally will not start in a clean, well stowed, and well ventilated area.

In general, storage compartments should be located away from sources of contamination, maintained in good repair, and kept clean. Below is a list of precautions that you should observe:

- When opening boxes, cartons, crates, remove nails, do not bend them down. Beware of broken glass.
- Put the heavier and bulkier materials on the lower shelves. Avoid storage on top of lockers or other high places.
- Food containers should be covered except when in actual use or service.
- Food containers become contaminated through wire, splinters, and dirt if not opened properly.
- Know where your firefighting equipment is located. Items should not be stored where they will be in the way when equipment is needed for emergency use. Flammable cleaning materials and other materials should be placed in specified lockers or in approved safety cans. Store only on lower shelves.
- Maintain good housekeeping so as to reduce the hazard of fire and other accident hazards. Place stores so that they do not protrude into aisles from bins or shelves.
- Be sure that light bulbs are guarded and that materials are no closer than 18 inches to any bulb.
- To avoid toppling and damage to cases and product, do not stack cases too high.
- Use shelving of sturdy construction. In storerooms afloat, merchandise should be secured behind battens or lashed down.
- Stockrooms should be properly ventilated and smoking prohibited.
- When lifting, keep your back straight, bend your knees and let your leg muscles do the work. If the load is too heavy for one man to manage, ask for assistance.
- Use adequate and safe ladders; avoid overreaching to get objects.

CHAPTER 7

MENU PLANNING

One of your most important duties as a senior Commissaryman is to see that the men who subsist on your mess are always well fed. This, as you already know, is a matter not only of quantity of food but also of quality, and especially of combinations. To be well fed is to have enough food containing the right amounts of the various nutrients necessary to health and well-being. For a mess to be a good feeder, menus must be carefully and skillfully planned to produce the right combinations of foods in dishes that will appeal to the personnel to whom they are served. And this must be accomplished within your budget and with the subsistence items you have had the foresight to stock aboard.

In *Commissaryman 3&2* you have studied the basic principles of nutrition, the Daily Food Guide, the Navy Ration Law and the objectives of menu planning. You have studied the general properties of proteins, fats, carbohydrates, cellulose, and water. You probably also have had some experience in planning menus. There is always more to learn, however. This chapter should aid you in planning better menus and eventually in supervising other menu planners.

This chapter is intended to help you find the answers to such questions as:

- Which foods must I be sure to include in each menu?
- How do I ensure a well balanced menu?
- How should I plan ahead so as to have good meals throughout a cruise?
- How do I adapt menus to cold or hot climates?

THE PLAN AND THE PLANNER

Menu planning in the Navy means planning a menu that is nutritionally adequate, using the food service capacities of your ship or station. When we speak of providing for food needs, we mean that enough nourishing food must be served and that this food must be attractive and reasonably acceptable to the personnel who are to eat it. This service must be accomplished afloat and ashore, consistently, under varying operating conditions, in widely differing geographic locations, and in all kinds of weather.

THE MENU PLANNER

The skill of the menu planner shapes every meal served in the Navy. Developing skill in appraising operating conditions, food acceptance, and food supplies in terms of potential meals is a demanding and responsible task. To perfect such skill requires:

- Gaining basic knowledge of menu planning principles.
- Balancing meals in nourishing and attractive combinations of food.
- Upholding the traditional Navy feeding standards established by the Navy Ration Law.
- Keeping food costs within justifiable limitations and prescribed monetary allowances.
- Planning for efficient food supply management and logistics.

Flexibility and adaptability are essential to planning meals. Rarely will you be able to use standard menus. The foods that are written into

your ship's menu must vary as operating conditions vary. Even ships of the same type as yours, operating under the same conditions and in the same area, probably could not use exactly the same menus. Knowing how to adapt menus is a skill you must acquire. Learn the "whats" and "whys" of menu planning and practice them.

THE MENU PLAN

The menu is a food plan for a meal, a day, a week, or longer. It is an important document. A good menu plan is a contribution to a smoothly operated ship or shore station. To the commanding officer, good menus are a sign of efficient mess management. Good menus tell him that the galley and mess facilities are being properly used, that the mess is operating within its prescribed allowances, and that general mess personnel know their jobs. But more than that, he knows that good menus mean a healthy crew and a high morale.

TOOLS AND GUIDES IN MENU PLANNING

When planning a menu, you need to be resourceful and imaginative. You should be well informed as well. Many sources of information are available to guide you, and there are procedures for compiling additional information you may need. Your acquaintance with and use of these sources of guidance are key factors in your success as a menu planner.

Studying previous menu plans on file will be helpful, for it will give a good indication of what is practicable for the preparation facilities and number of men subsisted in your mess. This old file, however, by its very ease of access, may tempt you to rely upon it too much, with resulting dullness and monotony in your menus. Instead, you should use the file of previous menus along with various other sources of guidance. Some of the most important of the latter are described in this section.

ARMED FORCES RECIPE SERVICE

Menu planners use standard recipes constantly when planning and developing menus. There are over 1,100 recipes and recipe variations printed on 5 by 8-inch cards. The cards are color coded to facilitate identification. The *Armed Forces Recipe Service* includes color photographs of certain recipe finsihed products, guidance type information cards and line drawings of bread and sweet roll make up procedures. The recipes are standardized to yield 100 portions and include efficient preparation techniques.

Use of the *Armed Forces Recipe Service* file in every stage of planning menus is necessary. Get acquainted with the different sections of the file. Be adventurous and try out different recipes from time to time. Keep a record or an index of those currently used and revise it periodically.

The *Armed Forces Recipe Service* is the basis for determining the supplies to requisition and planning workloads. These include (1) cost records for individual recipes, and (2) food acceptance factors.

Supplies to Requisition

Recipes provide information which can be used in advance menu planning from the standpoint of food supplies required to produce a meal, a day's meals, or 7 days' meals. Recipes are based on 100-portion quantities giving a workable figure for adjusting portions upward or downward as required to feed a given number of men. The adjusted figure is put to use in deciding quantities of food to requisition, to tell cooks the quantities to prepare, and so on.

Planning Workload

Use of recipes is essential to plotting time schedules for the cooks, bakers, spud coxswain, and others who are concerned with food preparation. Recipes are used also to obtain a workable plan for staggering the use of galley equipment.

Index of Recipes

One of your most valuable references is the *Index of Recipes* issued in conjunction with the *Armed Forces Recipe Service*. It helps you to make menu choices. The recipes in the *Index of Recipes* are listed according to the recommended sequence of listing major items on the menu. The index also lists miscellaneous information included in the *Armed Forces Recipe Service*.

FOOD ACCEPTABILITY

Customer acceptability of the menu is the goal of the menu planner. There is no set pattern to tell him what foods his mess patrons will eat and enjoy. An individual's food tastes may be influenced by many factors such as his food likes and dislikes before he entered the service, the foods he has learned to eat and enjoy during his service career, the group of friends he eats with at meal time and so forth. The menu planner must know his customers so that the meals he plans will be well-accepted. The following are ways you can determine the acceptability of specific foods in your mess.

Food Acceptance Factors

A food acceptance factor is one which expresses the percentage of men who will eat a particular dish. To obtain an acceptance factor for individual menu items, divide the number of portions of the item served by the number of men in attendance at the meal.

Keep a record of menu item acceptance on the Food Preparation Worksheet, (NAVSUP Form 1090), the individual recipe card, or the Index of Recipes. The individual cards of the *Armed Forces Recipe Service* provide the place to do this.

An acceptance factor is a valuable index of the popularity of menu items, and should be used for this purpose after testing out an item at several meals. Acceptance factors for the same menu item may vary from meal to meal. Different combinations of foods on a menu, weather, or varying appetities may alter the acceptance of an item. A more accurate acceptance factor may result by averaging figures obtained at several intervals.

Waste as an Indicator

Another way to determine acceptability is to keep a systematic check on plate or tray waste. This should be recorded on the food preparation worksheet.

Good food acceptance means less plate waste and leftovers to account for in planning the next round of meals. Even popular foods may become monotonous if served too often. Items like hamburgers or french fries, for example, need spacing on the menu.

Food Preference Ratings

The fact that men will take or accept items on the serving line does not prove that these are their preferred foods. They may have no better choice.

Food preference, or a stated attitude toward a food, may be determined by several approaches.

One means is to solicit written opinions from the crew about items or classes of foods when you have doubts about their relative popularity. A questionnaire can be developed on which the mess patrons can indicate their preference for various items. The manner of describing the foods, how the person is instructed about answering the questionnaire, and where he fills it out are important to obtaining good reliable data.

The most commonly used food preference questionnaire is a rating scale given to each man in a messline or at some other appropriate time. This type of questionnaire is easily tabulated and is reliable because checking a block or circling is all that a man is required to do.

Food preference questionnaires can determine which single food items are most or least popular, their desired frequency of use on a menu, and what menu combinations are most or least liked. An example of how to canvass for opinions on single food items is given in table 7-1. These food preference questionnaires should be updated periodically because tastes

Table 7-1.—Sample general mess food preference questionnaire

Circle one answer after each food.

	FOOD ITEM					
Not tried	Steamed frankfurters	Like very much	Like moderately	Neither like nor dislike	Dislike moderately	Dislike very much
Not tried	Pineapple and cottage cheese salad	Like very much	Like moderately	Neither like nor dislike	Dislike moderately	Dislike very much
Not tried	Spaghetti and meat balls	Like very much	Like moderately	Neither like nor dislike	Dislike moderately	Dislike very much
Not tried	Buttered green lima beans	Like very much	Like moderately	Neither like nor dislike	Dislike moderately	Dislike very much
Not tried	Succotash (lima beans and whole-kernel corn)	Like very much	Like moderately	Neither like nor dislike	Dislike moderately	Dislike very much

Adapted from "Food Acceptance Testing Methodology", Advisory Board on Quartermaster Research and Development, Committee on Foods, National Academy of Sciences, National Research Council, October 1954, p. 67.

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change, new men come aboard, and new items are procured.

MENUS FOR EXTENDED CRUISES

The best guides for planning menus and determining loading requirements are accurate records of a ship's own past usage and menu plans or menu summaries for previous extended cruises. Usage data and menus used during extended cruises should be collected to provide a basis for balanced loading during future deployment. The Subsistence Loading Guide for Small Surface Ships (NAVSUP P-346) provides menu planning and loading aids for use aboard surface ships feeding 99 or less men, or with prescribed endurance of less than 45 days. The 21 day cycle menu in the publication, with daily requirements list, weekly requisitioning guide, and endurance tables will be helpful in planning endurance loads when usage data are not available.

The 45-day Subsistence Endurance Base (SEB) contained in Food Service Management, NAVSUP P-486, is a guide that can be used with ship's usage data in planning menus and local lists for 60, 75, 90, and 120 day operational endurances.

FOOD USAGE RECORDS

The Subsistence Ledger (NAVSUP Form 335), makes possible quick, on-the-spot inventories of food supplies. This record, or other similar informal records of supplies used, will assist the menu planner in predicting what foods will be used.

A first consideration in advance menu planning should be "balanced" requisitioning. Past usage records help attain this balance by showing what is "on hand" and what items are needed. Planned calendars of stock rotation will prevent a rewrite of menus to incorporate surplus stocks of on-hand items. Items should be rotated on a regular basis, using oldest stocks first.

NAVY FOOD SERVICE NAVSUP P-476

Navy Food Service, NAVSUP P-476 [illegible] published bimonthly by the Navy Subsistence Office. It contains authoritative and reliable sources to guide food choices in planning Navy meals.

Periodically, *Navy Food Service* contains suggested menus, including the 42-day Armed Forces Menu. This guide menu illustrates how a basic cycle menu can be written and used year round with seasonal variations. *Navy Food Service* also suggests recipes that the menu planner possibly has not tried before. In addition to the menu and recipes, the *Navy Food Service* gives food preparation hints and subsistence news. Keep back copies of *Navy Food Service* filed for ready reference.

MENU BOARDS

Menu planning boards assist in planning menus that are based on crew preferences. There are two kinds of menu boards: (1) menu-planning boards that actually plan the menu within the Food Service Division and (2) a menu review board that functions in an advisory capacity. The type of board that acts on major decisions affecting food supplies to support a menu, or selection of food choices commensurate with galley equipment, workload, and other administrative decisions, must be composed of personnel with experience in food service. The representatives on this board are the commissarymen and chief petty officers in the Food Service Division. A menu review board consisting of personnel from all divisions on board can bring fresh ideas on general mess menus. Each command makes its own policy on menu board representation outside of Food Service Division. Menu boards, their requirements and functions are discussed in *Food Service Operations*, NAVSUP P-421.

FACTORS AFFECTING FOOD CHOICES FOR MENUS

[illegible] planning menus you will continually be [illegible]ith numerous detailed problems which [illegible] your choices of food for the menu. There [illegible]many restrictions which narrow down food [illegible]oices. Knowledge of nutritional requirements and food values, estimates of probable acceptability, technical knowledge of food costs, and current information on availability of supplies must be integrated into a single document. One or all of these factors may affect items chosen.

NUTRITIONAL STANDARD

Nutrition is of first importance. The menus should be adequate to maintain the good health and efficiency of the men.

MONETARY ALLOWANCES

Economic factors invariably concern all menu planners. General messes are operated on a monetary ration allowance. The Navy Subsistence Office publishes quarterly a list of fixed unit prices, for use in pricing food items issued to the general mess, and the monetary values of the basic daily allowance, supplementary allowances, and special allowances. The value of the basic allowance is developed from the standard Department of Defense Food Cost Index which contains a representative list of specific quantities of food items derived from 10 U.S. Code 6082 and the current Department of Defense appropriation act. Monetary ration rates which are sufficient to feed a full daily ration under normal operating conditions vary according to the average number of personnel allowed daily. It is expected that an under expenditure will exist at the end of the accounting period with proper mess management. This requires effective menu planning, control over

akouts, correct inventory procedures, food ıservation programs, and daily review of ion costs.

JUSTING MEALS R CLIMATE

The menu is seasonal in the sense that plans altered to include the special food features each season. Foods in season have a higher ality, are usually cheaper, and are better vored.

Adjusting Navy meals for climate must also e into account the great variation in climatic nditions under which Navy ships and shore tions operate. Menu plans should be made to t the weather in which you find yourself. od needs differ greatly with variations in nperature; and appetites may change.

ld Climate

Plan menus that are rich in energy value for en spending the majority of their time outside, strenuous jobs. Even in a cold climate creased amounts of energy-rich foods are not eded by men working in heated buildings, but ecial provision should be made for members of e group who may be engaging in outdoor tivities, such as flying or drilling. Use cream es, iced cakes, fried foods, breads, breakfast stries, butter, cereals, macaroni, rice, cream ups, vegetables, salad oils, gravy, sirups, ice eam, cheese, whipping cream, nuts, peanut tter, meats, dried beans, eggs, and other otein foods furnishing energy.

ot Climate

Plan menus which are a combination of both ht and substantial meals, EXCEPT for men ho work in heat, or who are exposed to the t sun for long periods. For these men, plan an beef, poulty, or veal. Use a variety of verages, including fruit juices. When available, e tropical or native fruits and vegetables proved for use in the general mess. However, not underestimate the basic energy needs of the men. Even in hot climates, food needs must be met.

STORAGE FACILITIES, EQUIPMENT AND PERSONNEL

Limited stowage space, especially on small craft deployed on long cruises, preclude the use of many perishable food items. Menus for these activities should include wide use of custom foods to extend those stores of perishable supplies which are available.

Plan menus well in advance for such cruises to ensure balanced stocks that will enable you to prepare balanced meals.

The choice of preparation for foods to be served is also dependent upon the galley equipment, the number of personnel to be fed and the number who have galley duty. Menus may be elaborate if labor saving equipments such as food shaping machines are available, or a sufficient number of men are on duty to allow preparation of last-minute items.

DIETERS' CHOICE

Normally Navy personnel who show overweight tendencies should have received medical instruction on sound dieting. As such they should generally know that they need to observe restrictions in total *quantity* of food eaten, while still eating a balanced *variety* of meat items (including fish and poultry), cereals and breads, fruits and vegetables, and milk or milk products.

Smaller portions should be available on request, in every Navy mess. Even preportioned cakes and pies can be presented in standard and smaller sizes. Many young dieters can eat occasional scaled down portions of pastries without gaining weight or compromising their efforts to lose weight. They should drink milk every day, and skim milk and low-fat milk as daily choices should help to keep the calorie score on milk low. Trimming excess fat from meats and skimming fat from gravy and soups are food quality standards that all mess patrons can benefit from. Fruit and small servings of fruit-flavored gelatin and sherbet are easy and

appreciated dessert choices for dieters and weight-conscious persons as well.

Work closely with the medical department on the Command's dieting needs and ensure that available general mess resources are used to best advantage in achieving healthy weight levels for Navy personnel.

VARIETY AND EYE APPEAL

Foods that look good and foods that go well together always have an advantage over those that are less attractive, even though they may be equally well-prepared and nutritious. Learn to choose and combine foods to achieve variety and harmony, both in appearance and flavor.

The following suggestions will help you:

- Vary the methods of preparation of the food served. (Carrots, for example, can be served raw, creamed, buttered, french fried, seasoned with lemon juice, or combined with peas.)
- Consider the color of food selected. Choose colors that look well together. (Avoid too many red foods at one meal.)
- Avoid unsuitable colors for foods. (Green milk, ugh! But green ice cream, O.K.) Serve interesting combinations of flavors. Combine mild and strong flavors but don't kill a delicate flavor with an unsuitable combination. Avoid using the same flavor twice in the same meal.
- Combine different shapes such as diced potatoes, sliced meats, and leafy vegetables.
- Do not plan all soft, dry, or moist foods for any one meal. Vary the texture.
- Write a new menu each time. Generally, avoid having the same meal on the same day of every week.

HOLIDAY AND SPECIAL MEAL CELEBRATIONS

Special meals for holidays or special meal celebrations (in messes either afloat or ashore) provide opportunities for festivity among the crew. A well planned special meal adds interest and real enthusiasm among cooks and crew, and it builds morale.

Creative menus may be planned using foods traditionally associated with the holiday. Research through the Armed Forces Recipe Service file should supply new ideas.

Consult the local chaplain for information on special religious days for the various faiths and cooperate by planning dishes in the menu that are in accord with his suggestions.

Figure 7-1 is a calendar listing special occasions generally celebrated. It is included for a handy reference.

Cycle Menu Planning System

The cycle menu system is the menu rotation plan recommended for use for Navy general messes. The cycle menu is a series of menus planned to be used consecutively and repeated

January	July
1 New Year's Day	4 Independence Day
February	August
12 Lincoln's Birthday 14 Valentine's Day Washington's Birthday (3rd Monday in February)	None
March	September
17 St. Patrick's Day	Labor Day (1st Monday in September)
April	October
None	Columbus Day (2nd Monday in October) Veteran's Day (4th Monday in October)
May	November
Armed Forces Day Mother's Day Decoration or Memorial Day (last Monday in May)	Thanksgiving Day (4th Thursday in November)
June	December
Father's Day (3rd Sunday in June)	25 Christmas Day

Note: Consult chaplain for religious days.

90.12

Figure 7-1.—Calendar of special holidays and religious days.

with some variations over a period of time. A 35-day or 42-day cycle menu, rotated with appropriate changes on a quarterly or seasonal basis is recommended for Navy general messes. Cycle menus save time and are easier to analyze thoroughly and to perfect than those written on a weekly basis. Cycle menus too, promote more accurate forecasting of ration costs and requirements for requisitioning and daily food preparation.

Preplanning Cycle Menus

Developing a meat plan, frequency charts, and spacing patterns are necessary preplanning functions which ensure an acceptable, appealing menu that is also within the daily monetary allowance.

A meat plan, also called a meat "block" shows the number of times the various types of meats (including breakfast meats), fish, poultry, and cheese are to be used each week on the cycle menu. This planned usage is directly related to the relative costs of these items, their relative popularity, and availability. Meat, which constitutes over 50 percent of the ration cost, is the largest single dollar investment in the menu. A planned pattern of usage during the cycle menu period will enable you to balance the use of expensive, moderately expensive, and inexpensive meat items.

The menu planner uses past menus that have known acceptability, the inventories of stocks on hand, and the FSC Group 89 Catalog as guides for developing the meat plan. See Table 7-2. When the meats have been chosen, they are plotted on a frequency chart, spaced on a spacing pattern and finally entered on the menu draft.

Frequency Charts and Spacing Patterns

Frequency charts and spacing patterns form the framework of the menu and, like the meat plan, are developed before the menu is drafted.

Frequency charts are developed for each major menu item or section, that is, the Meat, Poultry, Fish entrees, Potatoes or Potato Substitutes, Vegetables, Salads, Desserts, Soups, and Breads which form the basic menu structure. These charts serve as the advanced plotting of "what to feed", at which meal (breakfast, lunch, or dinner) and "How often." See Table 7-3.

Spacing patterns, see Table 7-4, show "when" the item will be served. With a spacing pattern, the menu planner can plot a balanced distribution of food items so that there is an appropriate interval between time less popular items are served and so that the menus are not "beef heavy" or "corn heavy".

DRAFTING MENUS

To do the best possible job in menu drafting the Navy menu planner needs a good working atmosphere in which to think. In addition he needs at hand the sources of information mentioned earlier in this chapter, and the meat plan, frequency charts, and spacing patterns that he has developed.

Most meals are planned around main dishes of meat, and other food items are planned to complement main dishes.

Use the standard Menu Draft (NAVSUP Form 1092) to build the week's menu. Each week's menu offers plenty of room for listing each menu item in a meal and has a column for the Armed Forces Recipe numbers to eliminate guesswork on the kind of food, the method of preparation, and the essential breakouts data. Establish a few standard symbols of abbreviations to achieve coordination between the Subsistence Storekeeper or Jack-of-the-dust and galley personnel. For example: (F) for frozen, (cn) for canned, (dehy) for dehydrated and (inst) for instant foods. Certain standard menu items such as coffee are printed on the draft to facilitate drafting.

The following steps illustrate a sequence in drafting major meal components:

Step 1—Main dishes, gravies, sauces, and accompaniments.
Step 2—Potatoes, potato substitutes, and vegetables.
Step 3—Salads
Step 4—Breakfast fruits and cereals.
Step 5—Desserts.
Step 6—Breads and breakfast pastries.

Table 7-2.—Sample meat plan.

MEAT, FISH, POULTRY ITEMS	Number Meals/Week						Total Meals
	1	2	3	4	5	6	
DINNER, SUPPER							
Beef							
Oven roast	1		1		1		3
Pot roast		1		1		1	3
Swiss steak	1		1		1		3
Grilled steak			1			1	2
Ground	2	1	1	2	1	2	9
Preformed patties	1	2	2	1	2	1	9
Diced			1			1	2
Liver	1		1		1		3
Frankfurters		1		1		1	3
Ham							
Canned, whole	1		1		1		3
Cooked, frozen	1	1		1		1	4
Pork							
Diced			1			1	2
Ham, boneless		1		1			2
Pork slices	1		1		1	1	4
Spareribs	1				1		2
Veal							

90.59

Table 7-3.—Sample vegetable frequency chart.

VEGETABLES ITEM [1]	1st Week [2]			2nd Week [2]			3rd Week [2]			4th Week [2]			5th Week [2]			6th Week [2]			Total Time Served [3]		
	B	D	S	B	D	S	B	D	S	B	D	S	B	D	S	B	D	S	B	D	S
Corn (10 meals)																					
Fresh																					
Frozen—on the cob		1																		1	
—whole grain					1						1							1		2	1
Canned—cream style			1					1						1						2	1
—whole grain		1										1					1			2	1
Onions																					
Dry																					
Dehydrated																					
Carrots																					
Fresh																					
Canned																					

1. "ITEM" Column: List major menu items and not recipe components (such as flour, salt, butter). This list reflects the food preferred and the varieties or forms in which the foods are available. As food preferences change or availability of certain items is altered, the foods listed may be adjusted.
2. "WEEK" Columns: Each weekly column is divided into three columns representing breakfast (B), dinner (D), and supper (S). This breakdown assists in planning the distribution of the same major menu items among these meals over a 42-day period. If, over a six-week period, corn is planned for 10 meals, the chart shows: Frozen on the cob corn the 1st week, once at dinner; frozen whole grain corn, 2nd and 4th week, once at dinner, and 6th week, once at supper; canned corn, cream style, 1st week, once at supper, 3rd and 5th week, once at dinner; canned whole grain corn, 1st and 6th week, once at dinner, 4th week, once at supper.
3. "Total Times Served" Column—This is subdivided into three meals to assist in estimating breakout requirements. It indicates the number of times major menu items are served at specific meals over the 42-day period.

90.44

Table 7-4.—Sample meat spacing pattern.

Week	Meal	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	B	Bacon	Link sausage	Canned corned beef	Canned luncheon meat	Bacon	Ground beef	Bacon
	D	Ground beef and Canned hamburgers	Canned salmon Cooked boneless ham	Preformed beef patties	Pork roast	Swiss steak	Frankfurters	Chicken cut-up
	S	Pork slices	Beef roast	Boneless turkey	Ground beef Pepperoni (pizza)	Perch, shrinp, fish portions, Cooked boneless ham	Pot roast	Preformed patties
2	B	Link sausage	Breakfast steaks	Bacon	Canned corned beef	Link sausage	Bacon	Canned ham
	D	Corned beef	Preformed beef patties	Fish portions, Salami, Canned ham, Cheese (subs)	Diced pork	Cooked boneless ham	Diced beef	Boneless turkey
	S	Swiss steak	Pork slices	Chicken, cut-up	Beef roast	Liver Ground beef	Pork roast	Pot roast
3	B							

1. Show the cut or type of meat, fish, or poultry planned for each meal, not the recipe number.
2. Plan an even distribution of entrees to prevent menus from becoming "pork heavy" or "beef heavy".

Step 7–Soups and beverages.
See figure 7-2.

A good rule-of-thumb to remember is that foods in the menu are listed in the order usually eaten in a meal. Accompaniments to menu items should be written alongside it as shown below, or may be written directly underneath it, space permitting.

Breakfast	Lunch or Dinner
Fruit or juice	Soup–crackers
Cereal–Milk	Main dish–gravy
Main dishes	Potatoes
Breakfast pastry	Vegetables
Bread–butter	Salad–dressing
Jam–jelly	Bread
Beverages	Dessert
	Beverages

MEAT, POULTRY, AND FISH

Enter on the menu draft form the meat, fish, or poultry entrees planned for each day on the frequency chart and the spacing pattern. Introduce variety to the menu by the recipe selected for the preparation of each meat cut or poultry entree. For example, beef, pot roast on the frequency chart and spacing pattern may be entered as L10-1 Ginger Pot Roast on the menu draft and the next time this style of beef is repeated on the spacing pattern, it may be entered as L10-2 Yankee Pot Roast on the menu draft. Preplanning the entrees includes selecting an alternative meat as a choice when rabbit, fish or liver are shown.

When all entrees for the cycle have been entered on each week's draft, it is good management to review the drafts to determine; (1) whether the proper variety and balance are maintained; (2) if higher portion cost entrees are balanced with lower portion cost entrees; and (3) if preparation of the entrees is within the capabilities of galley personnel and equipment.

POTATOES AND OTHER VEGETABLES

Frequency charts are developed for both potato/potato alternates and vegetables in conjunction with the meat frequency charts so that the items selected will complement the meat, fish, or poultry item planned for each day. Entering the potato/potato substitute and vegetables on the menu draft is the second step in menu planning. As with entree items, variety of preparation is introduced on the menu by the recipe card selected.

SALADS AND SALAD DRESSING

An array of salads and relishes can be prepared from the excellent variety of fresh, frozen, and canned fruits and vegetables available.

The *Armed Forces Recipe Service* offers many varieties of salads and kinds of salad dressings, as well as recipes for relishes. These numerous recipies are a fine foundation for a varied salad menu of consistently high quality.

If a salad bar is standard procedure at dinner and supper in your mess, planning is needed to achieve variety and avoid costly leftovers. Because the salad bar generally offers some variety, there is a temptation to offer the same assortment daily. With good planning, changes from day to day can be achieved.

When planning for salads and relishes (or salad bars), there are several factors to consider: (1) seasonal availability for procurement, (2) temperature and climate, (3) equipment and labor, and (4) combination of salad ingredients.

Select a salad dressing suited to the salad ingredients on which it is to be used. Use tart dressings with bland-flavored salads. Consult your Food Service Operations NAVSUP P-421 for ideas.

BREAKFAST FRUITS AND CEREALS

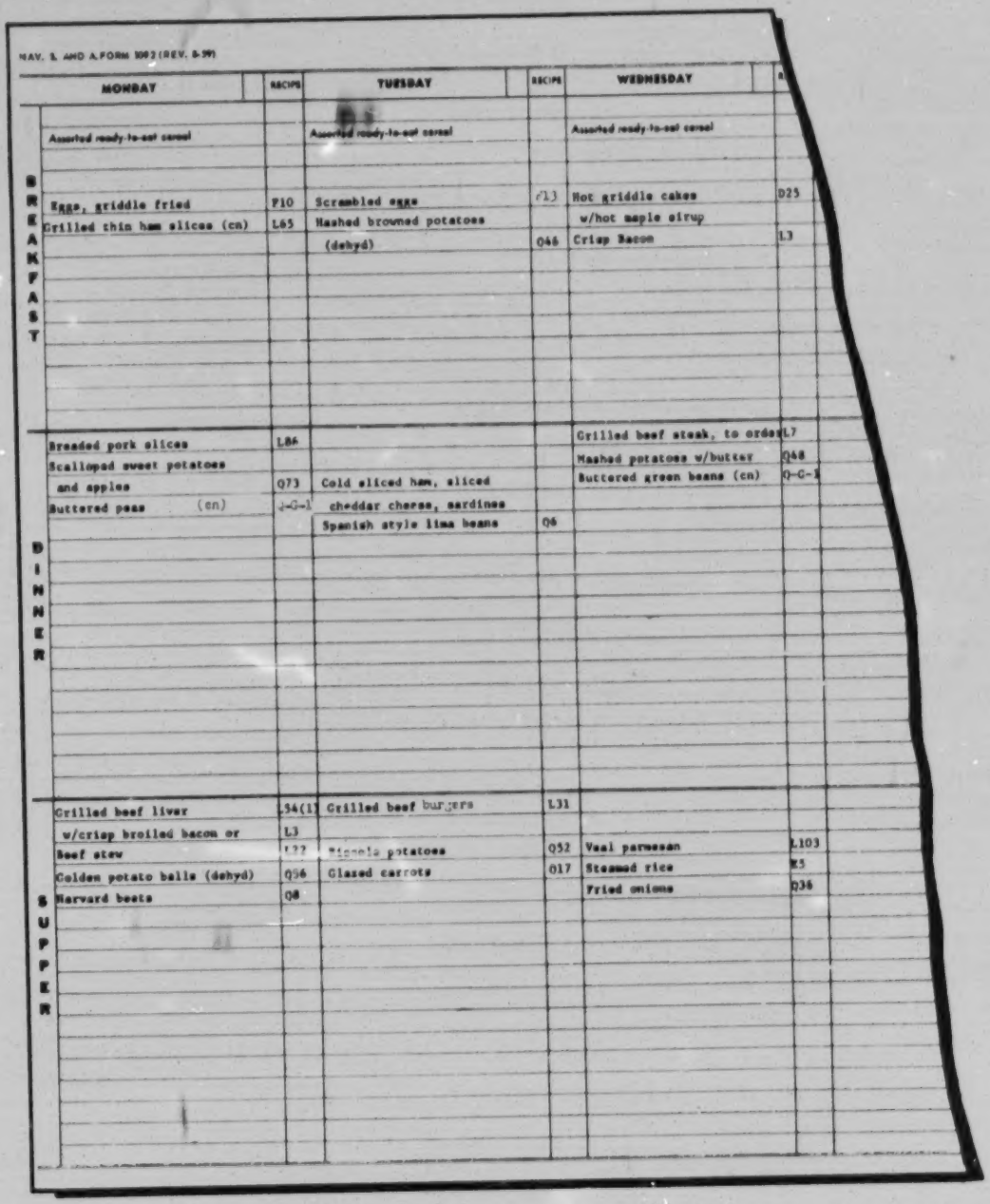
Steaming hot cooked cereals are a welcome and warming component of a hearty breakfast in cold weather. Warmer climates and higher temperatures tend to swing the popularity pendulum toward dry, ready-to-eat cereals.

NAV. S. AND A. FORM 1092 (REV. 8-59)

	MONDAY	RECIPE	TUESDAY	RECIPE
BREAKFAST	Eggs, griddle fried	F10	Scrambled eggs	F13
	Grilled thin ham slices (cn)	L65		
DINNER	Breaded pork slices	L86		
			Cold sliced ham, sliced cheddar cheese, sardines	
SUPPER	Grilled beef liver w/crisp broiled bacon or	L54(1) L3	Grilled beef burgers	L31
	Beef stew	L22		

48.26(90E).1A

Figure 7-2.—Step I. Main dishes, gravies, sauces, and accompaniments.



NAV. S. AND A. FORM 1092 (REV. 8-59)

	MONDAY	RECIPE	TUESDAY	RECIPE	WEDNESDAY	R
BREAKFAST	Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal	
	Eggs, griddle fried	F10	Scrambled eggs	F13	Hot griddle cakes	D25
	Grilled thin ham slices (cn)	L65	Hashed browned potatoes (dehyd)	Q46	w/hot maple sirup Crisp Bacon	L3
DINNER	Breaded pork slices	L86			Grilled beef steak, to order	L7
	Scalloped sweet potatoes and apples	Q73	Cold sliced ham, sliced		Mashed potatoes w/butter	Q68
	Buttered peas (cn)	J-G-1	cheddar cheese, sardines		Buttered green beans (cn)	Q-G-1
			Spanish style lima beans	Q6		
SUPPER	Grilled beef liver	L54(1)	Grilled beef burgers	L31		
	w/crisp broiled bacon or	L3				
	Beef stew	[illegible]	Riesels potatoes	Q52	Veal parmesan	L103
	Golden potato balls (dehyd)	Q56	Glazed carrots	Q17	Steamed rice	R5
	Harvard beets	Q8			Fried onions	Q36

48.26(90E).1B

Figure 7-2.—Step II. Potatoes, potato substitutes, and vegetables.

NAVSUP FORM 1092 (REV. 8-91)

MENU DRAFT

	MONDAY	RECIPE	TUESDAY	RECIPE	WEDNESDAY	RECIPE	THURSDAY
BREAKFAST	Eggs, griddle fried	F10	Scrambled eggs	F13	Hot griddle cakes	D25	Plain omelet
	Grilled thin ham slices (cn)	L65	Hashed browned potatoes (dehyd)	054	w/hot maple sirup		Baked pork sausage links
					Crisp Bacon	L3	
DINNER	Breaded pork slices	L85			Grilled beef steak, to order	L7	Pot roast of beef
	Scalloped sweet potatoes and apples	073	Cold sliced ham, sliced		Mashed potatoes w/butter	Q48	Brown beef gravy
	Buttered peas (cn)	Q-G-1	cheddar cheese, sardines		Buttered green beans (cn)	Q-G-1	German potato griddle cakes
	Spring salad	M44	Spanish style lima beans	06	Lettuce salad	M32	
	w/french dressing	M58	Cole slaw	M8	w/catsup dressing	M47	Buttered fresh corn-on-the-cob
							Tomato wedges - sweet gherkin pickles - green onions
SUPPER	Grilled beef liver w/crisp broiled bacon or	L54(1) L3	Grilled beef burgers	L31			Country style chicken
	Beef stew	L22	Rissole potatoes	052	Veal parmesan	J111	Cream gravy
	Golden potato balls (dehyd)	056	Glazed carrots	017	Steamed rice	E5	Parsley potatoes
	Harvard beets	08	Fruit salad		Fried onions	036	Herb buttered peas
	Assorted olives - celery sticks - green pepper rings		on lettuce w/creamy fruit dressing	M17 M56	Jellied spring salad w/mayonnaise	M29	Chef's salad w/zesty french dressing

48.26(90E).2

Figure 7-2.—Step III. Salads and dressings.

MENU DRAFT

NAV. S. AND A. FORM 1092 (REV. 8-59)

	MONDAY	RECIPE	TUESDAY	RECIPE	WEDNESDAY	RECIPE	THURSDAY
BREAKFAST	Chilled tomato juice		Ripe whole bananas		Chilled apricot halves (cn)		Chilled cantaloupe wedge
	Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal
	Farina	E2					
	Eggs, griddle fried	F10	Scrambled eggs	F13	Hot griddle cakes	D25	Plain omelet
	Grilled thin ham slices (cn)	L65	Hashed browned potatoes		w/hot maple sirup		Baked pork sausage links
			(dehyd)	Q54	Crisp Bacon	L3	
DINNER	Breaded pork slices	L85			Grilled beef steak, to-order	L7	Pot roast of beef
	Scalloped sweet potatoes				Mashed potatoes w/butter	Q48	Brown beef gravy
	and apples	Q73	Cold sliced ham, sliced		Buttered green beans (cn)	Q-G-1	German potato griddle cakes
	Buttered peas (cn)	Q-G-1	cheddar cheese, sardines		Lettuce salad	M32	
	Spring salad	M44	Spanish style lima beans	Q6	w/catsup dressing	M47	Buttered fresh corn-on-
	w/french dressing	M58	Cole slaw	M8			the cob
							Tomato wedges - sweet
							gherkin pickles - green
							onions
SUPPER	Grilled beef liver	L54(1)	Grilled beef burgers	L31			Country style
	w/crisp broiled bacon or	L3					chicken
	Beef stew	L22	Riesole potatoes	Q52	Veal parmesan	L103	Cream gravy
	Golden potato balls (dehyd)	Q56	Glazed carrots	Q19	Creamed rice	K5	Riesole potatoes
	Harvard beets	Q8	Fruit salad		Fried onions	Q36	Herb buttered peas
	Assorted olives - celery		on lettuce	M17	Jellied spring salad	M29	Chef's salad
	sticks - green pepper rings		w/creamy fruit dressing	M56	w/mayonnaise		w/zesty french dressing

48.26(90E).3

Figure 7-2.–Step IV. Breakfast fruits and cereals.

NAV. S. AND A.FORM 3992 (REV. 8-59)

MENU DRAFT

	MONDAY	RECIPE	TUESDAY	RECIPE	WEDNESDAY	RECIPE	THURSDAY
BREAKFAST	Chilled tomato juice		Ripe whole banana		Chilled apricot halves (cn)		Chilled cantaloupe wedge
	Assorted ready-to-eat cereal or		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal
	Farina	E2					
	Eggs, griddle fried	F10	Scrambled eggs	F13	Hot griddle cakes	D25	Plain omelet
	Grilled thin ham slices (cn)	L65	Hashed browned potatoes		w/hot maple sirup		Baked pork sausage links
			(dehyd)	Q54	Crisp Bacon	L3	
DINNER	Breaded pork slices	L85			Grilled beef steak, to-order	L7	Pot roast of beef
	Scalloped sweet potatoes				Mashed potatoes w/butter	Q48	Brown beef gravy
	and apples	Q73	Cold sliced ham, sliced		Buttered green beans (cn)	Q-G-1	German potato griddle cakes
	Buttered peas (cn)	Q-G-1	cheddar cheese, sardines		Lettuce salad	M32	
	Spring salad	M44	Spanish style lima beans	Q6	w/catsup dressing	M47	Buttered fresh corn-on
	w/french dressing	M58	Cole slaw	M8			the cob
							Tomato wedges - sweet
							gherkin pickles - green
							onions
	Yellow cake	G32	Cherry cobbler	I-G-5	Raisin pie	I46	Chilled pineapple chunks
	w/mocha frosting						
SUPPER	Grilled beef liver	L54(1)	Grilled beef burgers	L31			Country style
	w/crisp broiled bacon or	L3					chicken
	Beef stew	L22	Rissole potatoes	Q52	Veal parmesan	L103	Cream gravy
	Golden potato balls (dehyd)	Q54	Glazed carrots	Q17	Steamed rice	K5	Rissole potatoes
	Harvard beets	Q8	Fruit salad		Fried onions	Q36	Herb buttered peas
	Assorted olives - celery		on lettuce	M17	Jellied spring salad	M29	Chef's salad w/
	sticks - green pepper rings		w/creamy fruit dressing	M56	w/mayonnaise		french dressing
	Chilled watermelon wedge		Butterscotch brownies	B-3	Strawberry (F) shortcake	G-16	Banana split
			a la mode	J-12	w/whipped cream	K15	w/assorted toppings

48.26(90E).4

Figure 7-2.—Step V. Desserts.

MENU DRAFT

NAV. S. AND A. FORM 1092 (REV. 8-59)

	MONDAY	RECIPE	TUESDAY	RECIPE	WEDNESDAY	RECIPE	THURSDAY	RECIPE
BREAKFAST	Chilled tomato juice		Ripe whole banana		Chilled apricot halves (cn)		Chilled cantaloupe wedge	
	Assorted ready-to-eat cereal or		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal	
	Farina	E2						
	Eggs, griddle fried	F10	Scrambled eggs	F13	Hot griddle cakes	D25	Plain omelet	F11
	Grilled thin ham slices (cn)	L65	Hashed browned potatoes		w/hot maple sirup		Baked pork sausage links	L88
			(dehyd)	Q54	Crisp Bacon	L3	Assorted danish pastries	D17
	Hot toast - butter		Iced butterfly rolls		Hot toast - butter		Hot toast - butter	
	Jam				Jelly			
DINNER	Breaded pork slices	L85			Grilled beef steak, to-order	L7	Pot roast of beef	L10
	Scalloped sweet potatoes				Mashed potatoes w/butter	Q48	Brown beef gravy	O16
	and apples	Q73	Cold sliced ham, sliced		Buttered green beans (cn)	Q-G-1	Grilled potato cakes	Q48
	Buttered peas (cn)	Q-G-1	cheddar cheese, sardines		Lettuce salad	M32	Buttered fresh corn-on	QG2
	Spring salad	M44	Spanish style lima beans	Q6	w/catsup dressing	M47	the cob	
	w/french dressing	M58	Cole slaw	M8			Tomato wedges - sweet	
							gherkin pickles - green	
							onions	
							Sesame seed rolls	D-G-6
	Assorted breads	D6, D9	Assorted breads	D6, D9	Assorted breads	D6, D9	Assorted breads	D6, D9
	Butter		Butter		Butter		Butter	
	Yellow cake	Q32	Cherry cobbler	I-G-5	Raisin pie	I46	Chilled pineapple chunks	
	w/mocha frosting						Molasses fashioned cookies	
SUPPER	Grilled beef liver	L54(1)	Grilled beef burgers	L31			Country style	L135
	w/crisp broiled bacon or	L3	on toasted hamburger buns (C2)	QG-1			chicken	
	Beef stew	L22	Rissole potatoes	Q52	Veal parmesan	L103	Cream gravy	O17
	Golden potato balls (dehyd)	Q56	Glazed carrots	Q17	Steamed rice	E5	Rissole potatoes	Q52
	Harvard beets	Q8	Fruit salad		Fried onions	Q36	Buttered peas	Q-G-1
	Assorted olives - celery		on lettuce	M17	Jellied spring salad	M29	Chef's salad	M7
	sticks - green pepper rings		w/creamy fruit dressing	M58	w/mayonnaise		french dressing	M58
							Hot biscuits	D1
	Assorted Breads	D6, D9	Assorted Breads	D6, D9	Assorted Breads	D6, D9	Assorted Breads	D6, D9
	Butter		Butter		Butter		Butter	
	Chilled watermelon wedge		Butterscotch brownies	H3	Strawberry (F) shortcake	G-16	Banana split	J11
			a la mode	J12	w/whipped cream	K-15	w/assorted toppings	

48.26(90E).5A

Figure 7-2.—Step VI. Breads, spreads, and breakfast pastries.

Week beginning

FRIDAY	RECIPE	SATURDAY	RECIPE	SUNDAY	RECIPE
Chilled grapefruit and orange juice (ca)		Chilled whole orange		Chilled grapefruit segments (ca)	
Assorted ready-to-eat cereal or		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal or	
Whole wheat meal	E1			Oatmeal	E2
Grilled breakfast beef		Boston baked beans and ham	Q3	Fried eggs, to-order	P10
patties	L31	Cake doughnuts	D18	Crisp broiled bacon	L3
Cottage fried potatoes	Q46(1)	w/confectioner's sugar		Hot toast - butter	
Hot cinnamon toast or		Hot toast - butter			
Hot toast - butter					
Jelly		Jelly		Jam	
		Chicken fricassee	L131	Oven roast of beef	L5
		Dumplings	D20	Brown beef gravy	O16
Baked halibut steak	L106	Baked potato	Q44	Franconia potatoes	Q50
or		Parsley buttered fresh		Buttered baby limas (F)	Q-G-3
Corned beef mulligan	L45	carrots	Q-G-2	Old fashioned lettuce	
Oven brown potatoes	Q50	Hot pan rolls	D33	salad	M32
Broccoli (F) polonaise	Q10				
Confetti salad	M11				
Assorted breads	D6, D9	Assorted breads	D6, D9	Assorted breads	D6, D9
Butter		Butter		Butter	
Marble cake	G32	Bread pudding	J16	Lemon meringue pie	I33
w/fluffy icing	G45				
Pepper steak	L13	Spaghetti w/meat balls	L39		
Brown vegetable gravy	O16			Simmered frankfurters	L63
Mashed potatoes	Q48			Crisp potato chips	
Spinach (F)	Q-G-3	Buttered cauliflower (F)	Q-G-3	Stewed tomatoes	Q64
w/lemon wedge or		Cheese stuffed celery sticks	B6	Tossed vegetable salad	M48
Fried eggplant	Q28	dill pickle slices - ripe		w/French dressing	M58
Sliced tomato and cucumber		olives		Wiener rolls	D-G-6
salad and sour cream	M16	Toaster garlic bread	D7		
Hot yankee style corn bread	D15				
Assorted Breads	D6, D9	Assorted Breads	D6, D9	Assorted Breads	D6, D9
Butter		Butter		Butter	
Apple crisp	J1	Peach (F) ice cream	J12	Chilled pear halves (ca)	
		Coconut drop cookies	H15	Peanut butter cookies	H24

48.26(90E).5B

Figure 7-2.—Step VI. Breads, spreads, and breakfast pastries—Continued.

MENU DRAFT

NAV. S. AND A.FORM 1092 (REV. 8-59)

	MONDAY	RECIPE	TUESDAY	RECIPE	WEDNESDAY	RECIPE	THURSDAY	RECIPE
BREAKFAST	Chilled tomato juice		Ripe whole banana		Chilled apricot halves (cn)		Chilled cantaloupe wedge	
	Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal	
	Farina	E7						
	Fresh milk		Fresh milk		Fresh milk		Fresh milk	
	Eggs, griddle fried	F10	Scrambled eggs	F13	Hot griddle cakes	D25	Plain omelet	F11
	Grilled thin ham slices (cn)	L65	Hashed browned potatoes		w/hot maple sirup		Baked pork sausage links	L88
			(dehyd)	Q54	Crisp Bacon	L3	Assorted danish pastries	D17
	Hot toast - butter		Iced butterfly rolls		Hot toast - butter		Hot toast - butter	
			Hot toast - butter					
	Jam		Jelly		Jelly		Jam	
	Coffee		Coffee		Coffee		Coffee	
DINNER	Breaded pork slices	L86	Beef soup	P1	Grilled beef steak, to-order	L7	Pot roast of beef	L10
	Scalloped sweet potatoes		Croutons	D16	Mashed potatoes w/butter	Q48	Brown beef gravy	Q16
	and apples	Q73	Cold sliced ham, sliced		Buttered green beans (cn)	Q-G-1	Grilled potato cakes	Q48
	Buttered peas (cn)	Q-G-1	cheddar cheese, sardines		Lettuce salad	M32	Buttered fresh corn-on-the	
	Garden salad	M44	Spanish style lima beans	Q6	w/catsup dressing	M47	cob	Q-G-1
	w/french dressing	M58	Cole slaw	M8			Tomato wedges - sweet	
							gherkin pickles - green	
							onions	
							Sesame seed rolls	DG6
	Assorted breads	D6,D9	Assorted breads	D6,D9	Assorted breads	D6,D9	Assorted breads	D6,D9
	Butter		Butter		Butter		Butter	
	Yellow cake	G32	Cherry cobbler	I-G-5	Raisin pie	L46	Chilled pineapple chunks	
	w/mocha frosting						Molasses fashioned cookies	B22
	Iced orangeade	C10						
	Coffee — — Milk		Coffee — Hot Tea — Milk		Coffee — Hot Tea — Milk		Coffee — Iced Tea	
SUPPER	Grilled beef liver	L54(1)	Grilled beef burgers	L31	Vegetable soup	P7	Country style	L133
	w/crisp broiled bacon	L3	on toasted hamburger buns		Crackers		chicken	
	Beef stew	L22	Rissole potatoes	Q52	Veal parmesan	L103	Cream gravy	Q17
	Golden potato balls (dehyd)	Q56	Glazed carrots	Q17	Steamed rice	P5	Rissole potatoes	Q52
	Harvard beets	Q8	Fruit salad		Fried onions	Q36	Buttered peas	Q-G-1
	Assorted olives - celery		on lettuce	M17	Jellied spring salad	M29	Chef's salad	M7
	sticks - green pepper rings		w/creamy fruit dressing	M56	w/mayonnaise		w/french dressing	M38
							Hot biscuits	D1
	Assorted Breads	D6,D9	Assorted Breads	D6,D9	Assorted Breads	D6,D9	Assorted Breads	D6,D9
	Butter		Butter		Butter		Butter	
	Chilled watermelon wedge		Butterscotch brownies	M3	Strawberry (F) shortcake	G16	Banana split	
			a la mode	I12	w/whipped cream	K15	w/assorted toppings	I11
	Coffee — Iced Tea — Milk		Coffee — Iced Tea — Milk		Coffee — Iced Tea		Coffee — Hot Tea — Milk	

48.26(90E).6A

Figure 7-2.—Step VII. Soups and beverages.

Week beginning

FRIDAY	RECIPE	SATURDAY	RECIPE	SUNDAY	RECIPE
Chilled grapefruit and orange juices (cn)		Chilled whole orange		Chilled grapefruit segments (cn)	
Assorted ready-to-eat cereal		Assorted ready-to-eat cereal		Assorted ready-to-eat cereal	
Whole wheat meal	E1			Oatmeal	E2
Fresh milk		Fresh milk		Fresh milk	
Grilled breakfast beef		Boston baked beans and ham	Q3	Fried eggs, to-order	P10
patties	L31	Cake doughnuts	D18	Crisp broiled bacon	L3
Cottage fried potatoes	Q46(1)	w/confectioner's sugar		Hot toast - butter	
Hot cinnamon toast or		Hot toast - butter			
Hot toast - butter					
Jelly		Jelly		Jam	
Coffee		Coffee		Coffee	
Cream of mushroom soup	P14	Chicken fricassee	L131	Oven roast of beef	L5
Toast sticks		Dumplings	D2	Brown beef gravy	O16
Baked halibut steak	L106	Baked potato puff	Q44	Franconia potatoes	Q50
or		Parsley buttered fresh		Buttered baby limas (F)	Q-G-3
Corned beef mulligan	L45	carrots	Q-G-2	Old fashioned lettuce	
Oven brown potatoes	Q50	Hot pan rolls	D33	salad	M32
Confetti salad	M11				
Assorted breads	D6,D9	Assorted breads	D6,D9	Assorted breads	D6,D9
Butter		Butter		Butter	
Marble cake	Q32	Bread pudding	J16	Lemon meringue pie	I33
w/fluffy icing	Q45	w/cinnamon sauce	O26		
Coffee —		Coffee — Iced Tea		Coffee — Hot Tea — Milk	
Pepper steak	L13	Spaghetti w/meat balls	L39	Corn chowder	P11
Brown vegetable gravy	O16	Spaghetti		Croutons	D16
Mashed potatoes	Q48			Simmered frankfurters	L63
Spinach (F)	Q-G-1	Buttered cauliflower (F)	Q-G-1	Crisp potato chips	
w/lemon wedge or		Cheese stuffed celery sticks	B6	Stewed tomatoes	Q64
Fried eggplant	Q29	dill pickle slices - ripe		Tossed vegetable salad	M48
Sliced tomato and cucumber		olives		w/french dressing	M58
salad and sour cream	M16	Toasted garlic bread	D7	Wiener rolls	D-G-6
Hot yankee style corn bread	D15				
Assorted Breads	D6,D9	Assorted Breads	D6,D9	Assorted Breads	D6,D9
Butter		Butter		Butter	
Apple crisp	J1	Peach (F) ice cream	J12	Chilled pear halves (cn)	
Chilled chocolate milk	C1	Coconut drop cookies	M15	Peanut butter cookies	M24
Coffee — Hot Tea		Coffee — Iced Tea — Milk		Coffee — Iced Tea	

48.26(90E).6B

Figure 7-2.—Step VII. Soups and beverages—Continued.

Plan to offer a choice of fruit or juice each day and to ensure that a good source of Vitamin C is available to mess patrons, either the fruit or the juice should be citrus. In addition, fruits can be used to introduce variety on the menus. For example, raisins in oatmeal or rice; blueberries in griddle cakes; apples as apple fritters.

DESSERTS

Desserts must be individualized to each meal just as other menu components, taking into account the men's preferences and other influencing factors, such as climate, cooking facilities, and the skills of personnel.

Desserts are classified light, medium heavy, or heavy. Plan to use one of these according to the rest of the meal. If the meal includes hearty salads and creamed vegetables, a light dessert such as a fruitcup or flavored gelatin is more appropriate than a medium heavy one (puddings or ice cream and cookies), or heavy desserts. Balance out the day's desserts by planning a light dessert with heavy dinner at noon (chilled pear halves and oatmeal drop cookies) and a heavy dessert with a light supper (gold cake with lemon cream icing). One heavy dessert daily, especially one which must be baked the same day served, is sufficient for most general messes.

Make maximum use of mixes, ice cream, prepared pie fillings, gelatin desserts and other convenience foods when planning dessert menus to ensure variety of dessert choices.

A caution which must be observed, however, in planning desserts is avoiding repetitious flavors. It is easy to miss hidden flavor repetitions when breakfast juices and dinner and supper salads contain fruit. Watch for these duplications in dessert planning.

BREADS AND BREAKFAST PASTRIES

Piping hot yeast rolls and quick breads dress up a meal any day of the year. The location of an activity influences the number of hot breads used on the menu. Hot breads play an important role in balancing the cold meals favored in sultry climates, but they are also good with hot meals planned for chill, blustery weather.

When you write a menu be realistic. If baking facilities are limited or inexperienced Commissarymen have not yet fully developed their baking skills, limit baked items.

SOUPS

The soup component is among the last items planned for a dinner and/or supper menu. This sequence in menu planning is not based on the relative importance of soup to a menu, but rather on its relation to other menu items. Soups are classified as light, heavy, creamed, and chowder, and as with dessert items, are selected to balance and/or complement the menu. The number of times a soup is offered each day or each week should be based on crew acceptance of soup. If the acceptance of soup is high and justifies including it on the menu at both dinner and supper meals, plan to serve a different soup at each of these meals. Make maximum use of dehydrated soups and the canned condensed soups to offer variety on the menu.

Leftover soups carried over until the next meal are highly subject to contamination, and therefore, a health hazard. Further, it is impossible for soup which has been allowed to stand several hours before service to retain the excellent qualities of the freshly prepared item.

Avoid leftover soups as much as possible by careful planning and control of quantity. If you do decide to keep leftover soup, observe temperature rules strictly. NEVER SAVE SOUP OVER NIGHT.

BEVERAGES

The beverage component of menus is generally thought of as coffee or tea. Milk, also a beverage, is essential for good nutrition and should never be replaced or omitted from its usual place on the menu. It can be served chilled plain or flavored, or in hot cocoa as a winter weather beverage. Coffee and tea are not necessary for good health, and offering another choice for either beverage is acceptable.

Iced beverages added to the menu during warm weather, are refreshing, and provide an enjoyable change from the steady consumption of hot coffee or tea during the winter months. All iced fruit beverages in the *Armed Forces Recipe Service* contribute additional vitamins and minerals, as well as energy from the sugar they contain. Eliminate too frequent repetition of fruit juices and beverages having similar flavors on the weekly menus. Milk shake machines and carbonated soda dispensers may be used in the general mess also.

RECORDING THE MENU

The menu draft (NAVSUP Form 1092) is carefully checked and edited for accurate recipe numbers as well as correct recipe titles and is then presented to the Food Service Officer for his analysis. The Food Service Officer analyzes the menu to ensure that it is nutritionally balanced and reflects sound management with respect to personnel, food supplies, and food preparation equipment. The NAVSUP Form 1092 is returned to the senior Commissaryman (approved or with noted changes) for typing on the General Mess Menu (NAVSUP Form 1080). NAVSUP Form 1092 should be retained for use in preparing recipe number lists and instructions on the daily Food Preparation Worksheet (NAVSUP Form 1090), when used. When the NAVSUP Form 1090 is used, recipe numbers can be eliminated from the NAVSUP Form 1080.

The NAVSUP Form 1080 is signed by the senior Commissaryman in the "Prepared by" block, by the Food Service Officer in the first "Approved" block and then submitted to the Commanding Officer or his designated representative for approval and signature in the second "Approved" block. Menus may be submitted for command approval each week, or the cycle menu may be submitted in its entirety quarterly, or seasonally or when a new cycle menu is prepared.

Menus posted on menu boards, bulletin boards, in crews' quarters and so forth, should be written in appealing, descriptive and accurate terms, and, if possible, should omit recipe numbers.

MENU CHANGES

The commanding officer may grant written permission to the food service officer to make necessary changes in the approved menu. Such authorization may be furnished in the ship or supply department organization manual. Under this authority the food service officer may make changes in the menu necessary to meet any emergency which might arise. At the discretion of the commanding officer, a weekly summary of menu changes thus made, and the reasons therefor, are provided to the commanding officer at the time the forthcoming weekly menu is submitted to him for approval.

Each menu should include a notation at the bottom that "The food service officer is authorized to make changes to this menu when, due to unusual or unforeseen circumstances, it may be necessary to provide substitutions for food items not in stock, or to permit timely use of perishable foods."

Menu changes should be kept to an absolute minimum and should not be made without advance approval by the food service officer.

CHAPTER 8
EXPENDITURE OF FOOD ITEMS

You have just learned about the paperwork involved in menu planning. You will find there is a lot more paperwork required in supervising the general mess. You must become proficient in the control of breakouts, sales to private messes, transfers, surveys, ration components, daily cost of food items issued, and inventories. Of all the aspects of the food service operation there is none more important than the daily issues of food items to the general mess. The general mess operates under a monetary system, therefore you must be able to determine just how much it costs to feed the crew on any given day. Knowing what items and how many of each are broken out of the storerooms and reefers for issue each day provides this information. Lack of such knowledge leads to incorrect records and incorrect conclusions as to the status of the mess.

Other aspects of general mess operations such as transfers, sales to authorized messes, sales to other activities, sale of meals, issue and sale of special meals, and inventories also are covered in this chapter and very important to you.

After you have studied this chapter you should be able to prepare a food preparation worksheet, maintain the general mess control record, and apply the regulations applicable to the issue and transfer of food items, issuance of flight meals, and the sale of food items to other private food service operations.

This chapter is also intended to help you answer such questions as:

1. What duties has the senior Commissaryman in connection with the Food Preparation Worksheet?
2. Who may authorize the sale of food items to private messes.
3. What categories of personnel are entitled to flight meals at Government expense?
4. What is the purpose of a survey?

QUANTITY CONTROL

You should be responsible first, for drawing quantities of food items for the general mess. These breakouts are estimated and controlled by the information given by the executive or personnel officer orally, to the food service officer concerning total net rations allowed for all categories of personnel to be fed for the following day. For both afloat and ashore messes, the *Armed Forces Recipe Service*, and your knowledge of the food preferences of the personnel in your mess will maximize service.

The *Armed Forces Recipe Service* is a tool which provides the quantities of ingredients to be used for 100 portions. In planning breakout quantities, modify the number of rations to be prepared for each menu item according to known food preferences for particular menu items. This assures that food that is broken out will be eaten. For example, your mess may have 100 rations allowed but you will not break out and prepare 100 portions of every item on the menu. You will break out and prepare only those amounts that you predetermined will be eaten on the basis of food preferences and the actual number of men to be fed.

FOOD PREPARATION WORKSHEET

The Food Preparation Worksheet (NAVSUP Form 1090) is an equally important tool. It serves two purposes. It is a written directive—a

medium for passing information from supervisory personnel to watch captains and other key food service personnel. It becomes a guide for the working crew in that it is a ready reference for your instructions concerning the preparation of the daily menu. As the senior Commissaryman you will initiate the food preparation worksheet. You list on it the menu for the entire day—including any substitutions that you want made or leftovers you want used with a particular meal. In the space provided, you post the correct *Armed Forces Recipe Service* card number of the recipe to be used and the number of servings to be prepared. Be sure you post the number of men you expect to feed and the size portion of each item you want served. As a supervisor, you know the appetites of the men who eat in your mess and you know the size serving that will best satisfy these appetites—and at the same time—keep your food waste low.

There is a space provided for you to write any specific instructions concerning the preparation, serving, or handling of menu items. Make your instructions informative and realistic. Say, for example "roast beef will be carved on the line. Slice in thin slices weighing approximately 1-1/2 oz. each." The food preparation worksheet helps you organize the work involved in preparing the meals. By posting the time to start preparing the raw food for cooking and the time to actually start the cooking of each item you will set a smooth routine in your galley and eliminate confusion and waste due to poor organization.

Your watch captain will complete the food preparation worksheet and will post on it information that you, as the senior Commissaryman, will want to know. He will post the number of men actually fed, the amount of food left over or the number of portions "short," and the acceptability of the meal items. He bases his acceptability rating not only on the amount left over or "short" but also on the tray waste. The food preparation worksheet loses its value if you do not see that it is closely followed. Train your watch captain in the use of this form—and be sure it is completed and returned to you. See figure 8-1.

Keep the past food preparation worksheets on file and refer to them often; especially check for leftovers. Leftovers usually mean that your estimated quantities were too high, or the crew didn't care for the item.

SUBSISTENCE BREAKOUTS

The procedure for making daily issues to the galley represents a very important phase of general mess operation. Every effort should be made to keep control of these issues at all times for, when control is lost, shortages are likely to occur that may not be apparent until the closing inventory.

As senior Commissaryman it will be your responsibility to exercise control over the food items issued to the galley. And, control begins with determining food requirements. There are certain valuable tools which must be used: the planned menu, the prior week's file of food preparation worksheets which gives you acceptability of menu items, and recipe cards, which state exact quantities of food items required. Incidental, but also important in determining food requirements, are the day of the week, the weather, and the ship's operating schedule. Careful attention must be given to determining the daily breakout of meat. Meat accounts for nearly 50 percent of the ration cost. The need for accuracy in breakouts of high cost meat is obvious.

The task of accurately predicting meat breakout requirements is not an easy one. Not only must breakout quantities be carefully determined day by day, but the cut or form of meat must be specified. For some dishes, more than one type of meat may be suitable. In order to get the greatest return from the meat component, in terms of cost and ration quality, consider the following pointers when determining your meat requirements:

1. Keep up-to-date meal attendance records and past usage data for all meat items on the menu. (Reference to past records of breakouts will not give an accurate indication of usage unless the actual quantities used for the required servings are known. Your best source of information—the file of food-preparation worksheets.)

2. Breakouts of meat, particularly for oven-prepared or slow-cooking items, should NOT be

padded. Rather than overestimating roast meat breakouts, you must figure requirements closely, even at the risk of running short. If shortages occur finish with such quickly prepared items as grilled ham steaks, hamburgers, leftover cooked meat, or thawed, uncooked meat left from the previous day's breakout. Avoid using the same meats as "standby items."

3. Overestimating meat breakouts generates leftovers and destroys the ration cost of originally planned menus.

4. When serving grilled meat items, prepare part of the quantity needed just before serving time. Continue grilling during the serving period. That way, no more meat is cooked than is required and all of it is freshly cooked.

5. The cut or form of meat must be specified and not left up to the judgment of the personnel making breakouts. Examples:

- Pork Chop Suey—Unless you specify lower cost cuts, such as pork butts, you may receive higher cost pork loin.
- Baked Smoked Ham—Specify whether canned or frozen boneless ham roll is to be used.

6. When roast type meats are to be used for cold cuts, thinner slices are served; the quantity of meat to be broken out is smaller than for roast meat served hot. Examples:

- The quantity of boneless beef, oven roast required for serving 100 - 4 1/2 ounce slices of Hot Roast Beef is 40 pounds. However, if the menu specifies "Cold, Sliced Roast Beef" and the size serving is to be 2-1/2 ounces, the quantity of boneless beef, oven roast will be 26-27 pounds.
- If canned whole ham is used as "Cold, Sliced Baked Ham," the quantity of canned ham required to serve 100 - 2 1/2 ounce servings will be 18-19 pounds.

When you have compiled your food item requirements, the next step is to prepare your requests for breakouts. Requests for breakouts may be made on either the Subsistence Item Request/Issue Document (NAVSUP Form 1282) or on the Subsistence Requisition Document, NAVSUP Forms 1059A (Perishable-Frozen), 1059B (Perishable-Chill), 1059C (Perishable Frozen/Chill) or the Subsistence Report, NAVSUP Forms 1059-1A (Semi-Perishable), 1059-1B (Perishable-Frozen), 1059-1C (Perishable-Chill).

In either case, the breakout document must be accurate, and specific. When you use the Subsistence-Item Request/Issue Document (NAVSUP Form 1282), your request should read "Flour, Wheat, bread" not just "Flour", or "Beef, Boneless, Pot Roast" not "Beef, Boneless." The breakout requests should list the variety and quantities of all food items to be issued to the galley. They must be approved and signed by the food service officer before any food item is broken out from the bulk storeroom, issueroom, or consolidated bulk and issue storeroom.

All issues made must be supervised by you, the senior Commissaryman, or by another Commissaryman delegated to perform these duties. To promote an efficient organization, breakouts should be planned, and if possible, carried out at an established time. Such a policy, however, depends upon the size of the activity, the operating schedule, the available storage space, and so forth.

CONTROLLING ISSUES

All requests for issues to the galley may be recapped daily on one Subsistence Report (NAVSUP Forms 1059-1A, 1B, and 1C. Study Figure 8-2 and you will see how unit cost prices are entered and extended. Run an adding machine tape on these extensions to get the total daily cost. Enter these data on the General Mess Control Record (NAVSUP Form 338). Each morning the senior Commissaryman submits a *Subsistence Report* for the previous day to the food service officer. When the NAVSUP Form 1282 is used for issues to the galley, it is not necessary to recap the issues on a *Subsistence Report.* An adding machine tape is prepared and stapled to all NAVSUP Forms 1282 representing the previous day's issues.

The General Mess Control Record, which tells the financial status of your mess, indicates if accuracy has been maintained in breaking out food items, extending prices, and so forth. An accurate financial status shows you areas where

BEST COPY AVAILABLE

FOOD-PREPARATION WORKSHEET (4061)

NAVSUP FORM 1090 (5-66)

DAY: TUESDAY DATE: 8 MARCH 197-

MESS: MELVILLE GALLEY NEWPORT, R.I. PREPARED BY: H. F. Keane CSC PORT WATCH CAPTAIN: R. C. Jones CS STARBOARD WATCH CAPTAIN: R. White CS1

MEAL	ALLOWED	PREDICTED	ACTUAL
Breakfast	100	85	80
Dinner	100	100	95
Supper	100	70	50 (many left galley)

	RECIPE CARD	MENU ITEM	PORTIONS TO PREPARE	INSTRUCTIONS	START PREPARATION	START COOKING	NUMBER OF BATCHES	PORTIONS LEFT OVER	COMMENTS (Evaluation, use of left overs, remarks)
BREAKFAST		Chilled Grapefruit Halves	50	See reverse side	0615		As needed	40	Return to chill space
		Assorted Dry Cereal		Open as needed	0615		As needed		
	E-2	Hot Oatmeal	25	Leave slack - will thicken	0600	0615	2	10	Gracord, fair acceptability
	F-11	Plain Omelet	85	Follow Note 1 on Recipe. Use size 1 ladle	0600	0625	As needed	—	Excellent, tender omelet
	L-88	Baked Pork Sausage Links	85	Drain at least twice during baking	0600	0625	2	—	very good
	D-19	Raised Doughnuts	85	See reverse side				—	Slightly greasy
		Hot Toast		Toast 12 slices at a time	0615	0625	4		
LUNCH	L-143	Roast Turkey	70	Turkey completely thawed - 350 oven	1145	1145		—	Start roasting for evening meal
	L-7	Grilled Beef Steaks to order	100	Watch timing. Have some "rare" at all times	1100	1125	To order	—	Steaks tender
	Q-45	French Fried Potatoes	100	Follow Note 3 on recipe. Check temperature	1100	1125	6	—	Very acceptable
	Q-G-3	Buttered Whole Grain Corn	100	Measure the water carefully	1115	1120	4	10	Acceptable, use for evening meal
	Q-73	Stewed Tomatoes	80	Use dehydrated onions in Step 2	1045	1110	3	—	acceptable, Bread salad today
	M-12	Cottage Cheese Salad	75	See reverse side. Use dehy. cottage cheese					
	M-G-2	Assorted salad bar		See reverse side					
	D-7	Toasted Garlic Bread		Use dehydrated garlic in Step 1					Return to chill space
	D-9	White Bread		See reverse side					
	G-5	Banana Filled Cake	100	See reverse side					
	G-48	Marshmallow Frosting	100	See reverse side				—	Very acceptable
SUPPER	P-1	Beef Noodle Soup	50	Use Soup & Gravy Base, beef. Break noodles	1615	1630	1	2 qt	Discard
	L-143	Hot Sliced Turkey Sandwich	70	Let cooked turkey set 30 min. Machine slice	1615		1	2½	Turkey tender and moist
	Q-16	Brown turkey gravy	70	Taste for seasoning. Not too much pepper	1600	1615	2	—	acceptable, seasoned well
	Q-57	Mashed Potatoes (DEHY)	70	Do not over-beat	1545	1600	4	10	acceptable, chill space
	Q-G-3	Buttered Broccoli	40	Add 2 tsp oregano to butter in Step 3	1600	1605	4	5	acceptable discard
	Q-G-3	Buttered Mixed Vegetables	60	Watch timing carefully	1600	1610	4	10	acceptable, chill space
	M-32	Lettuce Salad	75	See reverse side				20	Chill space
	M-G-2	Salad Bar		See reverse side					
		Assorted Breads		See reverse side					
	J-4	Cranberry Crunch w/whipped topping	100	See reverse side				40	Can serve with ice cream as choice

STOCK NO. 0108-502-7901

48.46.1

Figure 8-1.—Food preparation worksheet (front).

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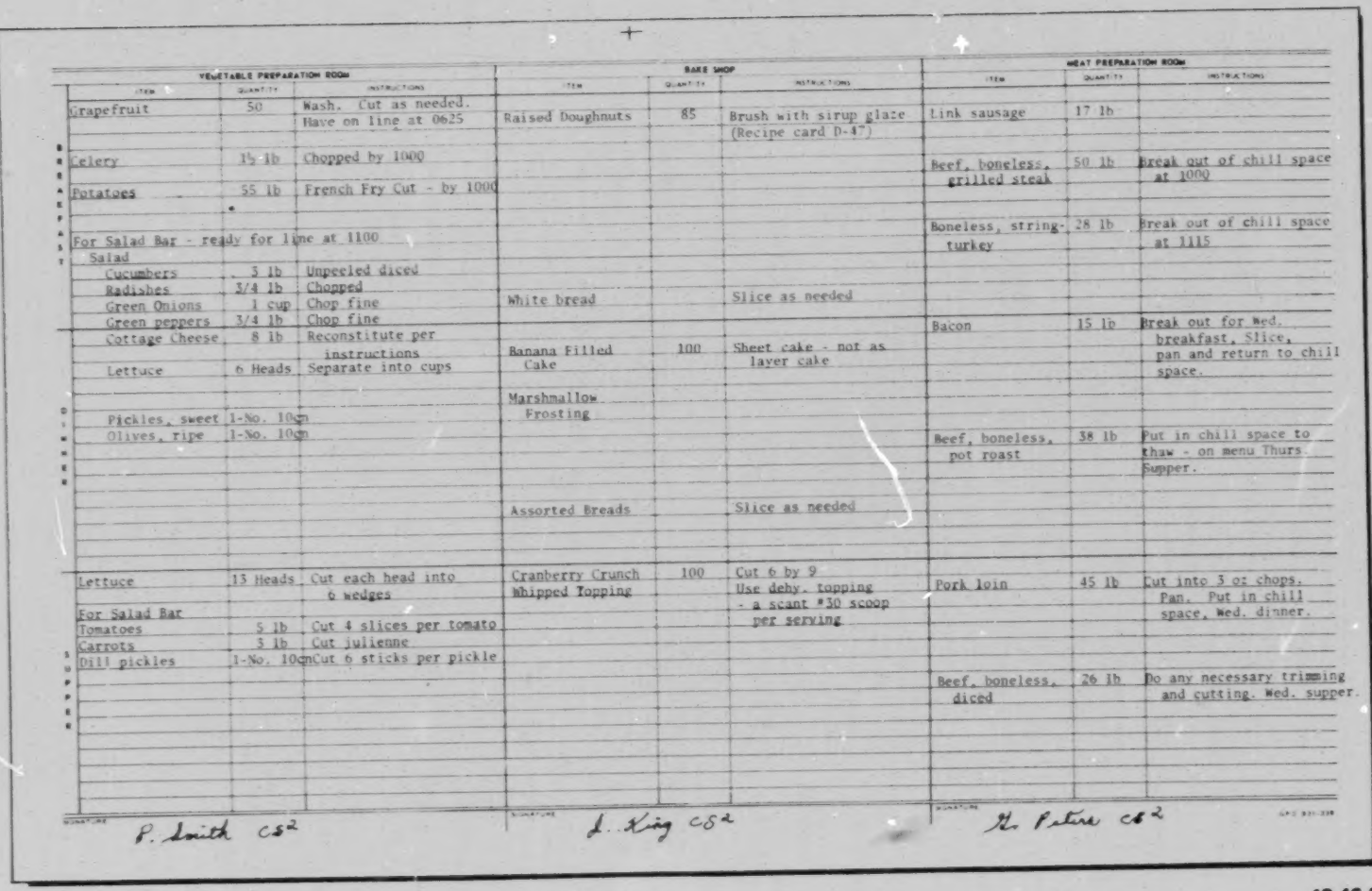

VEGETABLE PREPARATION ROOM

ITEM	QUANTITY	INSTRUCTIONS
BREAKFAST		
Grapefruit	50	Wash. Cut as needed. Have on line at 0625
Celery	1½ lb	Chopped by 1000
Potatoes	55 lb	French Fry Cut - by 1000
For Salad Bar - ready for line at 1100		
Salad		
Cucumbers	3 lb	Unpeeled diced
Radishes	3/4 lb	Chopped
Green Onions	1 cup	Chop fine
Green peppers	3/4 lb	Chop fine
Cottage Cheese	8 lb	Reconstitute per instructions
Lettuce	6 Heads	Separate into cups
DINNER		
Pickles, sweet	1-No. 10cn	
Olives, ripe	1-No. 10cn	
SUPPER		
Lettuce	13 Heads	Cut each head into 6 wedges
For Salad Bar		
Tomatoes	5 lb	Cut 4 slices per tomato
Carrots	3 lb	Cut julienne
Dill pickles	1-No. 10cn	Cut 6 sticks per pickle

P. Smith CS2

BAKE SHOP

ITEM	QUANTITY	INSTRUCTIONS
Raised Doughnuts	85	Brush with sirup glaze (Recipe card D-47)
White bread		Slice as needed
Banana Filled Cake	100	Sheet cake - not as layer cake
Marshmallow Frosting		
Assorted Breads		Slice as needed
Cranberry Crunch Whipped Topping	100	Cut 6 by 9 Use dehy. topping - a scant #30 scoop per serving

L. King CS2

MEAT PREPARATION ROOM

ITEM	QUANTITY	INSTRUCTIONS
Link sausage	17 lb	
Beef, boneless, grilled steak	50 lb	Break out of chill space at 1000
Boneless, string-turkey	28 lb	Break out of chill space at 1115
Bacon	15 lb	Break out for Wed. breakfast. Slice, pan and return to chill space.
Beef, boneless, pot roast	38 lb	Put in chill space to thaw - on menu Thurs. Supper.
Pork loin	45 lb	Cut into 3 oz chops. Pan. Put in chill space, Wed. dinner.
Beef, boneless, diced	26 lb	Do any necessary trimming and cutting. Wed. supper.

H. Peters CS2

48.46.2

Figure 8-1.—Food preparation worksheet (back).

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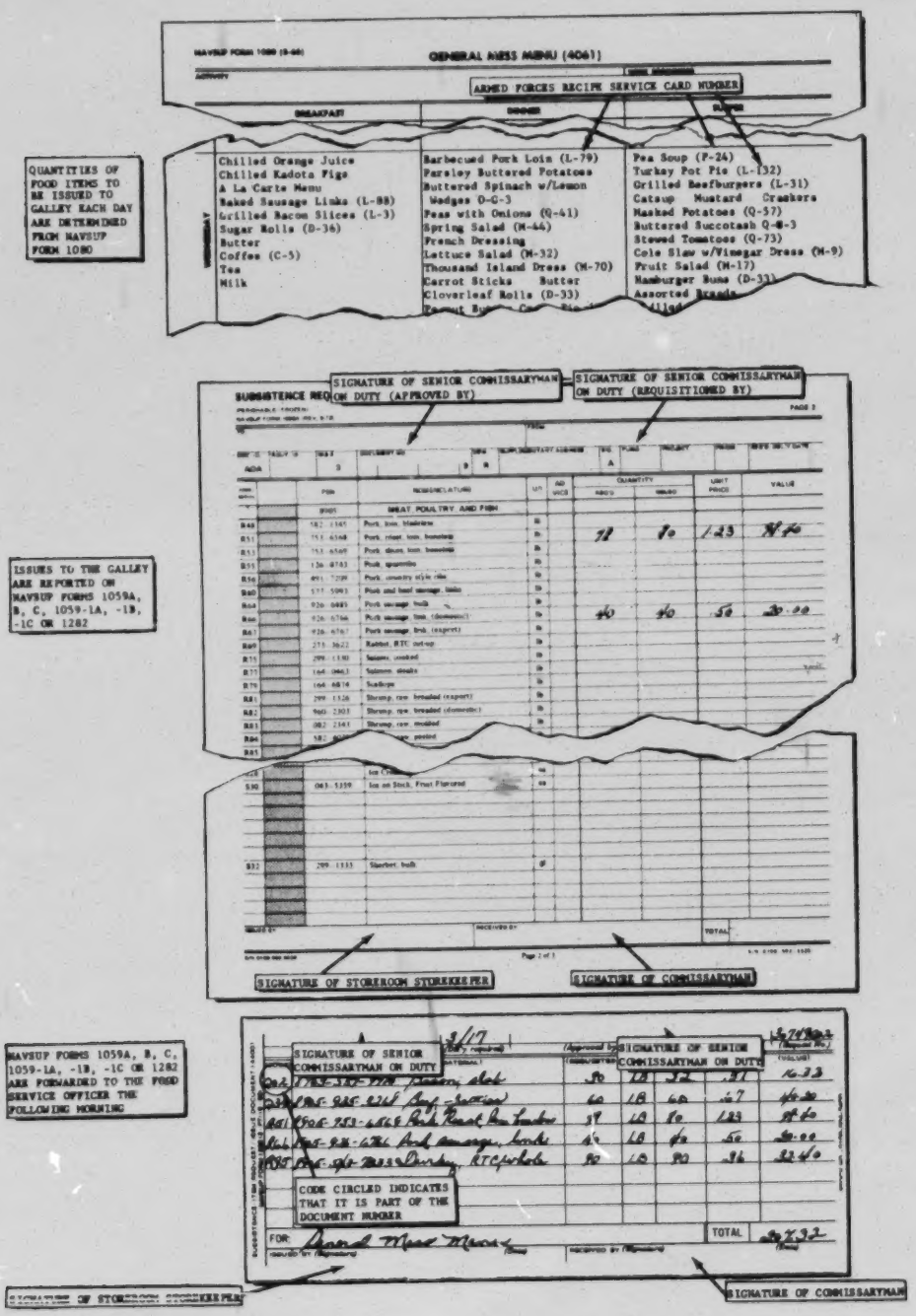
GENERAL MESS MENU (4061)
ARMED FORCES RECIPE SERVICE CARD NUMBER
BREAKFAST
DINNER
SUPPER
QUANTITIES OF FOOD ITEMS TO BE ISSUED TO GALLEY EACH DAY ARE DETERMINED FROM NAVSUP FORM 1080
Chilled Orange Juice
Chilled Kadota Figs
A La Carte Menu
Baked Sausage Links (L-88)
Grilled Bacon Slices (L-3)
Sugar Rolls (D-36)
Butter
Coffee (C-5)
Tea
Milk
Barbecued Pork Loin (L-79)
Parsley Buttered Potatoes
Buttered Spinach w/Lemon
Wedges D-G-3
Peas with Onions (Q-41)
Spring Salad (M-44)
French Dressing
Lettuce Salad (M-32)
Thousand Island Dress (M-70)
Carrot Sticks Butter
Cloverleaf Rolls (D-33)
Pea Soup (P-24)
Turkey Pot Pie (L-132)
Grilled Beefburgers (L-31)
Catsup Mustard Crackers
Mashed Potatoes (Q-57)
Buttered Succotash Q-G-3
Stewed Tomatoes (Q-73)
Cole Slaw w/Vinegar Dress (M-9)
Fruit Salad (M-17)
Hamburger Buns (D-33)
Assorted Breads
SIGNATURE OF SENIOR COMMISSARYMAN ON DUTY (APPROVED BY)
SIGNATURE OF SENIOR COMMISSARYMAN ON DUTY (REQUISITIONED BY)
ISSUES TO THE GALLEY ARE REPORTED ON NAVSUP FORMS 1059A, B, C, 1059-1A, -1B, -1C OR 1282
SIGNATURE OF STOREROOM STOREKEEPER
SIGNATURE OF COMMISSARYMAN
NAVSUP FORMS 1059A, B, C, 1059-1A, -1B, -1C OR 1282 ARE FORWARDED TO THE FOOD SERVICE OFFICER THE FOLLOWING MORNING
SIGNATURE OF SENIOR COMMISSARYMAN ON DUTY
CODE CIRCLED INDICATES THAT IT IS PART OF THE DOCUMENT NUMBER
SIGNATURE OF STOREROOM STOREKEEPER
SIGNATURE OF COMMISSARYMAN

66.34:48.29A:90.43

Figure 8-2.—Reporting issues to the general mess.

tighter control should be initiated–in the food preparation, portion control, and in serving. The 338 will reflect the results of good management or it will show where it is lacking.

Supervising all issues to the galley and posting the information to the issue documents is also essential in maintaining stock control.

Processing daily issues is another important step. Issue documents are posted to the Subsistence Ledger (NavSup Form 335). You will use this information to assist in planning menus, to determine procurement orders, and to balance your loads. Accuracy on this document is important and is dependent upon accurate issue documents.

GENERAL MESS CONTROL RECORD

The General Mess Control Record (NAVSUP Form 338) is used to provide a daily cumulative account of the financial management of the general mess. Overissues can be seen immediately, and steps can be taken to reduce ration costs. Keep a constant check on the standing of the general mess. See figures 8-3 and 8-4 for examples of General Mess Control Records afloat and ashore. To reduce the administrative workload of records keeping afloat, information previously recorded on the Rations Allowed/Fed in Port NAVSUP Form 1330 has now been incorporated within the NAVSUP Form 338.

Posting Ration Credit

Total ration credits are posted daily to the NAVSUP Forms 338 as follows:

1. Afloat activities, while in port, shall enter the actual number of meals fed, including meals sold, in the applicable columns. Multiply columns (2) through (5) by the ration conversion factors for each meal (breakfast, 20%; dinner, 45%; supper, 35% and night, 35%) and enter the total in column (6). Columns (2) through (5) are left blank for at sea days. Dinner and supper meal conversion factors may be interchanged to accommodate local feeding requirements. However, the conversion factor of 45% must be applied to the meal which has the highest raw food cost. The conversion factor of 35% is applied to the other meal.
2. Activities ashore do not use columns (2) through (5) since meal counts are reported on the daily Recapitulation of Meal Record (NAVSUP Form 1292). The total number of rations reported on the NAVSUP Form 1292 is reported in column (6).
3. All general messes shall complete columns (7) through (12) of the NAVSUP Form 338. Column (7), Cumulative Total of Ration Credits, is completed by adding the figure in column (6) to the preceding day's entry in column (7) and entering the result in the current day's column (7), to maintain a running count of ration credits earned. In determining monetary allowances (columns (8) and (9)), multiply the number of daily ration credits in column (6) by the monetary allowance (basic plus any supplemental/special allowances applicable) and post the result in column (8); then add the column (8) figure to the preceding day's entry in column (9) and post the result to the current day's column (9). Daily food cost (column 10) is determined by adding the costs of rations from NAVSUP Forms 1059A, B, and C, 1059-1A, 1B, and 1C and/or a tape of individual NAVSUP Forms 1282, less bakery products sold, and entering the total in column (10). The cumulative total of food costs (column 11) is entered following the same procedures as for columns (7) and (9). Column (12), over (–)/under (+) issues, is discussed in detail in the following paragraph.

Posting Over (–)/Under (+) Issues

The General Mess over/under issue dollar value is the difference between cumulative food cost (column (11)) and cumulative monetary allowance (column (9)). When the figure in column (9) is the greater, an underissue condition exists and the difference is posted in blue or black ink as a plus (+) in column (12). When the

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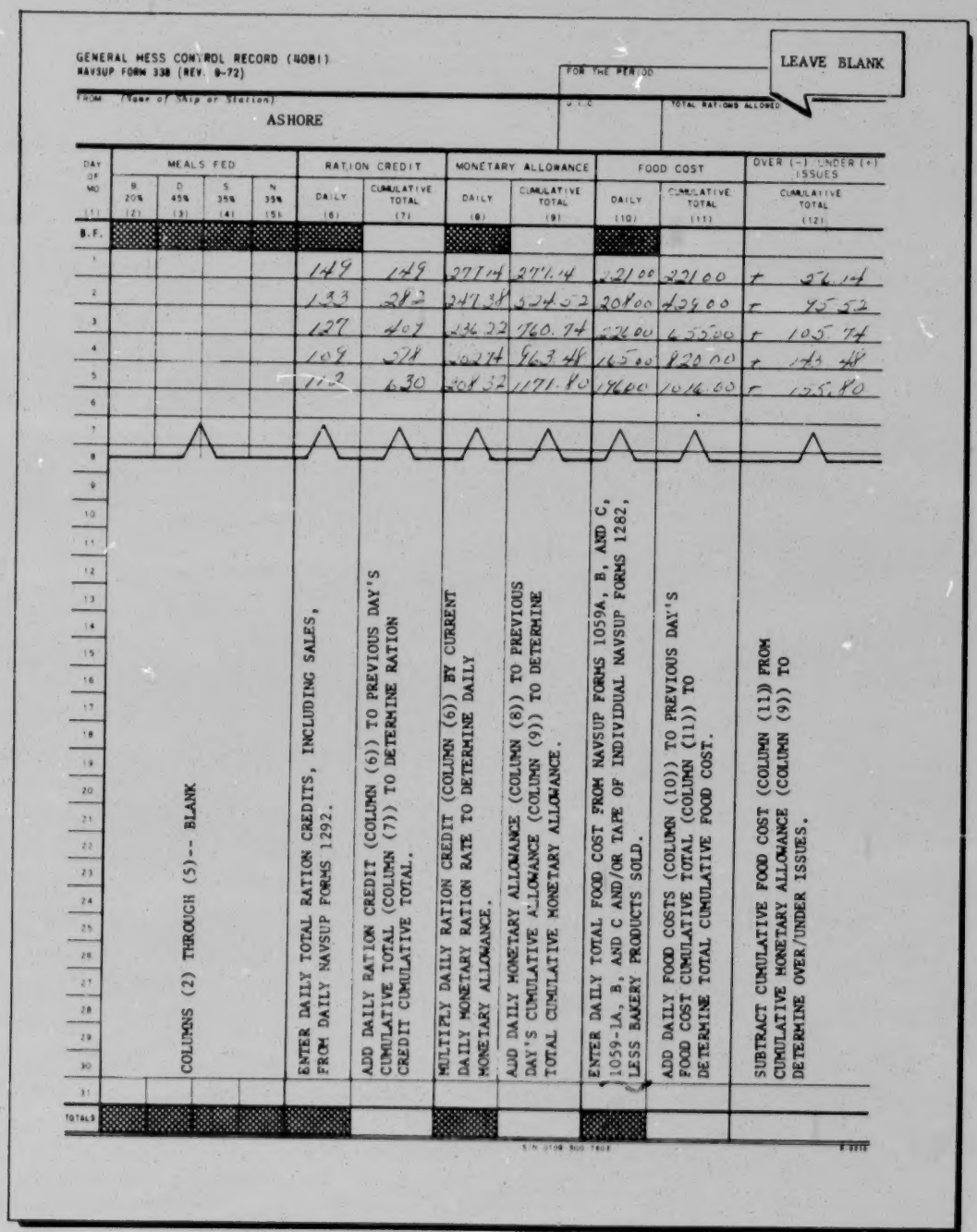

GENERAL MESS CONTROL RECORD (4081)
NAVSUP FORM 338 (REV. 9-72)

FOR THE PERIOD

LEAVE BLANK

FROM (Name of Ship or Station)

ASHORE

O.I.C.

TOTAL RATIONS ALLOWED

DAY OF MO (1)	MEALS FED B 20% (2)	D 45% (3)	S 35% (4)	N 35% (5)	RATION CREDIT DAILY (6)	RATION CREDIT CUMULATIVE TOTAL (7)	MONETARY ALLOWANCE DAILY (8)	MONETARY ALLOWANCE CUMULATIVE TOTAL (9)	FOOD COST DAILY (10)	FOOD COST CUMULATIVE TOTAL (11)	OVER (-) UNDER (+) ISSUES CUMULATIVE TOTAL (12)
B.F.											
1					149	149	271.14	271.14	221.00	221.00	+ 50.14
2					133	282	247.38	524.02	204.00	425.00	+ 99.52
3					127	409	236.22	760.24	226.00	651.00	+ 109.24
4					109	518	202.74	963.48	165.00	816.00	+ 147.48
5					112	630	208.32	1171.80	176.00	992.00	+ 179.80
6											
7											
8											
9											
10											
11											
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24											
25											
26											
27											
28											
29											
30											
31											
TOTALS											

COLUMNS (2) THROUGH (5)-- BLANK

ENTER DAILY TOTAL RATION CREDITS, INCLUDING SALES, FROM DAILY NAVSUP FORMS 1292.

ADD DAILY RATION CREDIT (COLUMN (6)) TO PREVIOUS DAY'S CUMULATIVE TOTAL (COLUMN (7)) TO DETERMINE RATION CREDIT CUMULATIVE TOTAL.

MULTIPLY DAILY RATION CREDIT (COLUMN (6)) BY CURRENT DAILY MONETARY RATION RATE TO DETERMINE DAILY MONETARY ALLOWANCE.

ADD DAILY MONETARY ALLOWANCE (COLUMN (8)) TO PREVIOUS DAY'S CUMULATIVE ALLOWANCE (COLUMN (9)) TO DETERMINE TOTAL CUMULATIVE MONETARY ALLOWANCE.

ENTER DAILY TOTAL FOOD COST FROM NAVSUP FORMS 1059A, B, AND C, 1059-1A, B, AND C AND/OR TAPE OF INDIVIDUAL NAVSUP FORMS 1282, LESS BAKERY PRODUCTS SOLD.

ADD DAILY FOOD COSTS (COLUMN (10)) TO PREVIOUS DAY'S FOOD COST CUMULATIVE TOTAL (COLUMN (11)) TO DETERMINE TOTAL CUMULATIVE FOOD COST.

SUBTRACT CUMULATIVE FOOD COST (COLUMN (11)) FROM CUMULATIVE MONETARY ALLOWANCE (COLUMN (9)) TO DETERMINE OVER/UNDER ISSUES.

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Figure 8-3.—General Mess Control Record, Afloat.

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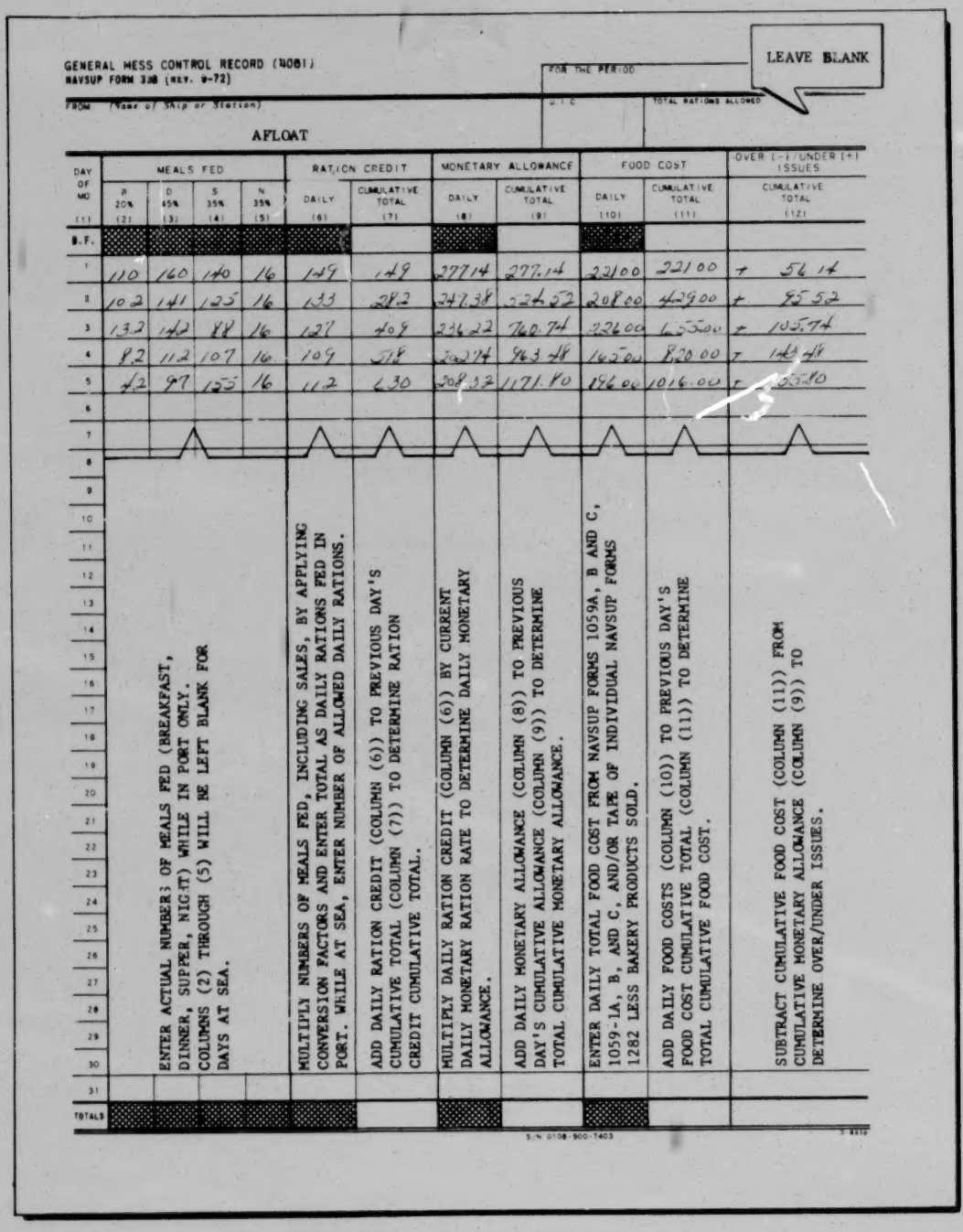

GENERAL MESS CONTROL RECORD (NAVSUP)
NAVSUP FORM 338 (REV. 9-72)

LEAVE BLANK

FOR THE PERIOD

FROM (Name of Ship or Station)

U. I. C.

TOTAL RATIONS ALLOWED

AFLOAT

DAY OF MO (1)	MEALS FED B 20% (2)	D 45% (3)	S 35% (4)	N 35% (5)	RATION CREDIT DAILY (6)	RATION CREDIT CUMULATIVE TOTAL (7)	MONETARY ALLOWANCE DAILY (8)	MONETARY ALLOWANCE CUMULATIVE TOTAL (9)	FOOD COST DAILY (10)	FOOD COST CUMULATIVE TOTAL (11)	OVER (-) / UNDER (+) ISSUES CUMULATIVE TOTAL (12)
B.F.											
1	110	160	140	16	149	149	277.14	277.14	22100	22100	+ 56.14
II	102	141	125	16	133	282	247.38	524.52	20800	42900	+ 85.52
3	132	142	88	16	127	409	236.22	760.74	22600	65500	+ 105.74
4	82	112	107	16	109	518	202.74	963.48	16500	82000	+ 143.48
5	42	97	155	16	112	630	208.32	1171.80	15600	1016.00	+ 155.80
6											
7											
8	ENTER ACTUAL NUMBERS OF MEALS FED (BREAKFAST, DINNER, SUPPER, NIGHT) WHILE IN PORT ONLY. COLUMNS (2) THROUGH (5) WILL BE LEFT BLANK FOR DAYS AT SEA.				MULTIPLY NUMBERS OF MEALS FED, INCLUDING SALES, BY APPLYING CONVERSION FACTORS AND ENTER TOTAL AS DAILY RATIONS FED IN PORT. WHILE AT SEA, ENTER NUMBER OF ALLOWED DAILY RATIONS.	ADD DAILY RATION CREDIT (COLUMN (6)) TO PREVIOUS DAY'S CUMULATIVE TOTAL (COLUMN (7)) TO DETERMINE RATION CREDIT CUMULATIVE TOTAL.	MULTIPLY DAILY RATION CREDIT (COLUMN (6)) BY CURRENT DAILY MONETARY RATION RATE TO DETERMINE DAILY MONETARY ALLOWANCE.	ADD DAILY MONETARY ALLOWANCE (COLUMN (8)) TO PREVIOUS DAY'S CUMULATIVE ALLOWANCE (COLUMN (9)) TO DETERMINE TOTAL CUMULATIVE MONETARY ALLOWANCE.	ENTER DAILY TOTAL FOOD COST FROM NAVSUP FORMS 1059A, B AND C, 1059-1A, B, AND C, AND/OR TAPE OF INDIVIDUAL NAVSUP FORMS 1282 LESS BAKERY PRODUCTS SOLD.	ADD DAILY FOOD COSTS (COLUMN (10)) TO PREVIOUS DAY'S FOOD COST CUMULATIVE TOTAL (COLUMN (11)) TO DETERMINE TOTAL CUMULATIVE FOOD COST.	SUBTRACT CUMULATIVE FOOD COST (COLUMN (11)) FROM CUMULATIVE MONETARY ALLOWANCE (COLUMN (9)) TO DETERMINE OVER/UNDER ISSUES.
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
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30											
31											
TOTALS											

S/N 0108-900-7403

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Figure 8-4.—General Mess Control Record, Ashore.

figure in column (11) is the greater, an overissue condition exists and the difference is posted in red ink as a minus (–) in column (12).

Food Service Officer

The food service officer checks the NAVSUP Form 338 daily to:

1. ensure that the general mess is operating within the authorized allowance;
2. ensure that it is being posted daily.

When overissue is indicated by a red entry under the "Over/Under Issue (12)" column, immediate action must be taken to determine the cause and to eliminate the overissue by a corresponding underissue. At the end of each month the food service officer compares the number of rations claimed on the Ration Report (NAVSUP Form 27) with rations recorded on the NAVSUP Form 338. When a discrepancy occurs, the cause must be determined and corrective action taken. At the end of each quarter, the food service officer compares the total on the quarterly summary of issues to the general mess with the final entry under the "Total (11)" column as a check on the efficiency of the general mess management and the accuracy with which the NAVSUP Form 338 is maintained.

Senior Commissaryman

The senior Commissaryman uses the data available on the NAVSUP Form 338 for menu planning and for menu revision and adjustment as follows:

- Determine the current financial status of the general mess before preparing a menu, especially when planning to use high cost menu items.
- Compare the "Daily (8)" column entries with the "Daily (10)" column entries as a check of the actual cost each day with the authorized cost for the same day.
- Relate the actual cost shown in the "Daily (10)" column to the daily menus to determine the relatively high and low cost menus and use that information in planning future menus and to adjust menus which have resulted in excessively high costs.

TRANSFER OF FOOD ITEMS

At the direction of your food service officer you may be called upon to estimate quantities of food items that can be spared for transfer to another ship or station. As you review your stocks and develop your estimate, always consider the needs of your mess first. Make a complete check of your stock against the planned menu and the length of time before replenishment. Although the final decision is made by your food service officer, your estimate should not in any way jeopardize the general mess of your ship.

TRANSFER DOCUMENTS

The authority to break out food items for transfer between ships and general messes ashore should be covered by a DOD Single Line Item Requisition System Document (Manual) (DD Form 1348) (for semiperishable items) or Subsistence Requisition Document, NAVSUP Forms 1059A (Perishable-Frozen), 1059B (Perishable-Chill) or 1059C (Perishable-Frozen/Chill).

TRANSFER TO MILITARY SEALIFT COMMAND

The food service officer who furnishes food items to civil service manned ships of the Military Sealift Command should prepare a Requisition and Invoice/Shipping Document (DD Form 1149) as a cash sale to the area or subarea commander, Military Sealift Command having cognizance of the ship. He credits the appropriation, Military Personnel, Navy, subhead 3140, and functional account 73110 or 73170. The original and two copies of the invoice should be receipted by a responsible representative of the receiving activity. The signed original, one signed copy, and three unsigned copies of each invoice are forwarded with the General Mess Operating Statement

(NAVSUP Form 45) to cover the expenditure. One signed copy of the expenditure invoice should be retained.

TRANSFERS OF LESS THAN FULL CASES

Food items other than boneless meats are expended in less than full cases to submarines and small craft which do not have adequate storage space. Expenditures of small quantities are covered by memorandum receipts for each delivery. Expenditures are recapitulated monthly or on departure of the ship being supported and are extended at the last receipt price by ships other than tenders. Tenders extend the recap at current fixed prices. An invoice in money value only is prepared for the total value of items expended. The original and one copy of the money value invoice and a copy of the document showing recapitulation of issues should be furnished to the receiving ship.

RETURNING FOOD ITEMS TO STORE

On occasion your ship may be required to turn in to store food items. When such is the case the DOD Single Line Item Release/Receipt Document (DD Form 1348-1) is used. In the case of bulk turn in due to decommissioning, fleet rehabilitation and modification programs, and the like, the documents may be partially or completely prepared by the receiving activity from a material listing or inventory provided by the ship. This deviation from normal procedure is prearranged and agreed to by both the receiving activity and the ship turning material in to store.

Material listings or inventories of bulk turn in should contain date of pack information and should be forwarded to the receiving activity as far in advance as of the proposed turn in as is possible. When a date of pack inventory is not provided, date of pack information should be entered in data block "V" on the DD Form 1348-1.

Action Prior to Turn-in

Prior to returning any food item to the supply system it should be visually inspected for spoilage and defects. Boxed and bagged items should be carefully inspected for infestation by rodents and insects. Canned products should be checked for pinholing, rust, dents, and swelling.

Special attention should be given to items with a date of pack older than the immediate preceding year. Only those items that pass the visual inspection should be turned in to store.

Any food that fails to pass the visual inspection should be surveyed and disposed of as outlined in NAVSUP P-486.

Excess stocks of food items may be transferred to a store ship (AF) in the immediate vicinity when turn in to store ashore is not feasible. When complete food item loads must be returned to the supply system due to decommissioning, fleet rehabilitation and modification programs, and so forth, the material should be turned in to the nearest specialized support depot, direct supply support point, or other Navy subsistence supply activity. Every effort should be made to exhaust stocks of perishable items prior to the date of turn in.

Stocks of operational rations and insurance items should be rotated within the period of storage life expectancy shown in the storage tables, paragraphs 5004 of the NAVSUP P-486. These items are not to be turned in to store ashore except under the following conditions:

1. Stock remaining aboard troop carrying ships after completion of training maneuvers.
2. Stocks that cannot be economically utilized by the general mess because of inactivation or other reasons requiring food items to be off loaded.

Recording Transfers

Transfers are posted from the Subsistence Requisition Document (NAVSUP Forms 1059A, B, and C), DOD Single Line Item Requisition System Document (Manual) (DD Form 1348), or DOD Single Line Item Release/Receipt Document (DD Form 1348-1), as the transactions occur. The quantity is posted to the

Stock Talley (NAVSUP Form 209) and the Subsistence Ledger (NAVSUP Form 335), and the total money value is posted to the Record of Receipts and Expenditures (NAVSUP Form 367) at the last receipt invoice price.

SALES TO AUTHORIZED MESSES

Food items authorized for use in the general mess may be sold to private messes when, in the opinion of the food service officer, the sale will not unduly deplete the quantity available for issue to the general mess. Items not authorized for general mess use may be procured ONLY for immediate sale to private messes. However, the private messes should be informed that these items may not be returned to the general mess for credit.

SALES PROCEDURE

The sales procedure is the same for all messes. So, as an example, we shall discuss the procedures for handling sales of food items to the wardroom. See figure 8-5.

Steward procedures:

1. Prepare Subsitence Item Request/Issue Document (NAVSUP Form 1282) in triplicate (original and two copies) listing the items required.

2. Present the breakout document to the mess treasurer (or his authorized representative). The mess treasurer numbers the document by using the Julian date (4 digits) plus a 9 and followed by the alpha/numeric food item code and logs the number in his log. He then signs the face of the NAVSUP Form 1282, indicating his approval.

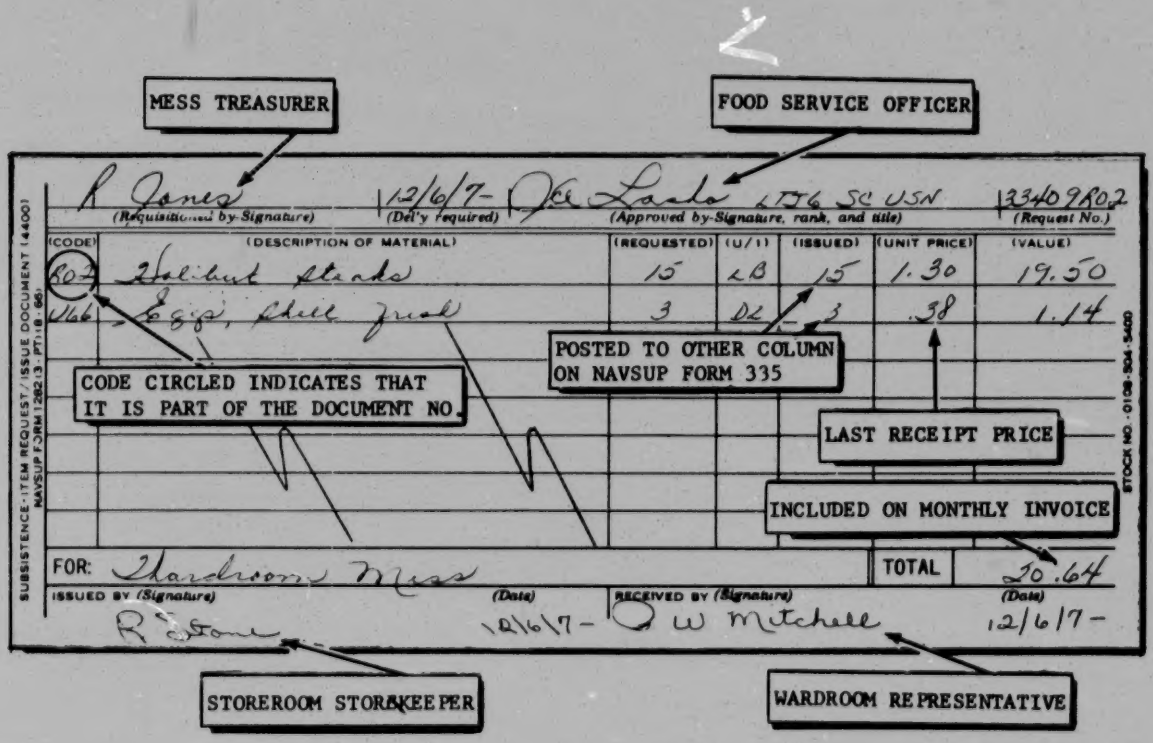

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Figure 8-5.—Completed NAVSUP Form 1282.

3. Upon approval by the mess treasurer, take NAVSUP Form 1282 to the food service officer; who will record the document's number in a log which he maintains for that purpose. The food service officer then signs the face of the document, indicating his approval.

4. Upon approval for issue by the food service officer, present the NAVSUP Form 1282 to the issue room storekeeper, who issues the items requested. (The issue room storekeeper and the Steward sign the NAVSUP Form 1282 in the appropriate blocks.)

Issue room storekeeper procedures:

5. Post his Stock Tally cards (NAVSUP Form 209), if he maintains them.

6. Take all copies of the document to the food service records keeper.

Records Storekeeper procedures:

7. Price, extend, and total all copies of the document.

8. Return one signed copy to the mess treasurer and use the other to post to the Subsistence Ledger (NAVSUP Form 335).

9. Retain his copy of the NAVSUP Form 1282 in the supply office files.

10. Take the original document to the food service officer, who will place it under lock in his personal possession.

SALES OF GALLEY PRODUCED BAKERY PRODUCTS

When galley produced bakery products are sold to an authorized mess, the cost of the ingredients must be charged to that mess and credited to the general mess. The mess is charged for the galley-baked products (GBP) on a NAVSUP Form 1282 (see fig. 8-6), using unit prices from the price list for galley-produced products furnished by the Navy Subsistence Office.

SALE PRICES

With the exception of galley produced bakery products and fresh meat not sold in complete units, the sale price for all food items are at the last receipt price. Galley produced bakery products are priced from a price list furnished by the Navy Subsistence Office. Pricing of meat, however, requires some computation.

SALE OF MEAT

Afloat general messes use large amounts of beef, boneless, 6-way; veal, boneless, 3-way. When sales of the above types of meat are made, the applicable percentage should be applied to the last receipt price to arrive at the sale price for a particular category. Individual categories that compose a unit, and the percent of the unit price at which each category should be sold, follow:

Beef, Boneless, 6-Way

Categories	Number of cases
Grill steaks (portion cut)	1
Oven roasts	1
Swiss steaks (portion cut)	0 or 1
Pot roasts	1
Ground, bulk	2 or 1
Ground, preformed patties (3 ounce)	2 or 1

Beef, Boneless, 6-Way

Categories	Percent of Unit	Percent of Unit Price for Sale
Grill steaks (portion cut)	18.5 minimum	170
Oven roasts	16.5 minimum	130
Swiss steaks (portion cut)	11.0 minimum	120
Pot roasts	15.0 minimum	100
Ground, bulk	19.5 minimum	50
Ground, preformed patties (3 ounce)	19.5 maximum	60

A unit of 6-way boneless beef weighs approximately 300 pounds, each case weighing a maximum of 50 pounds except ground preformed patties which weigh approximately 41 pounds per case.

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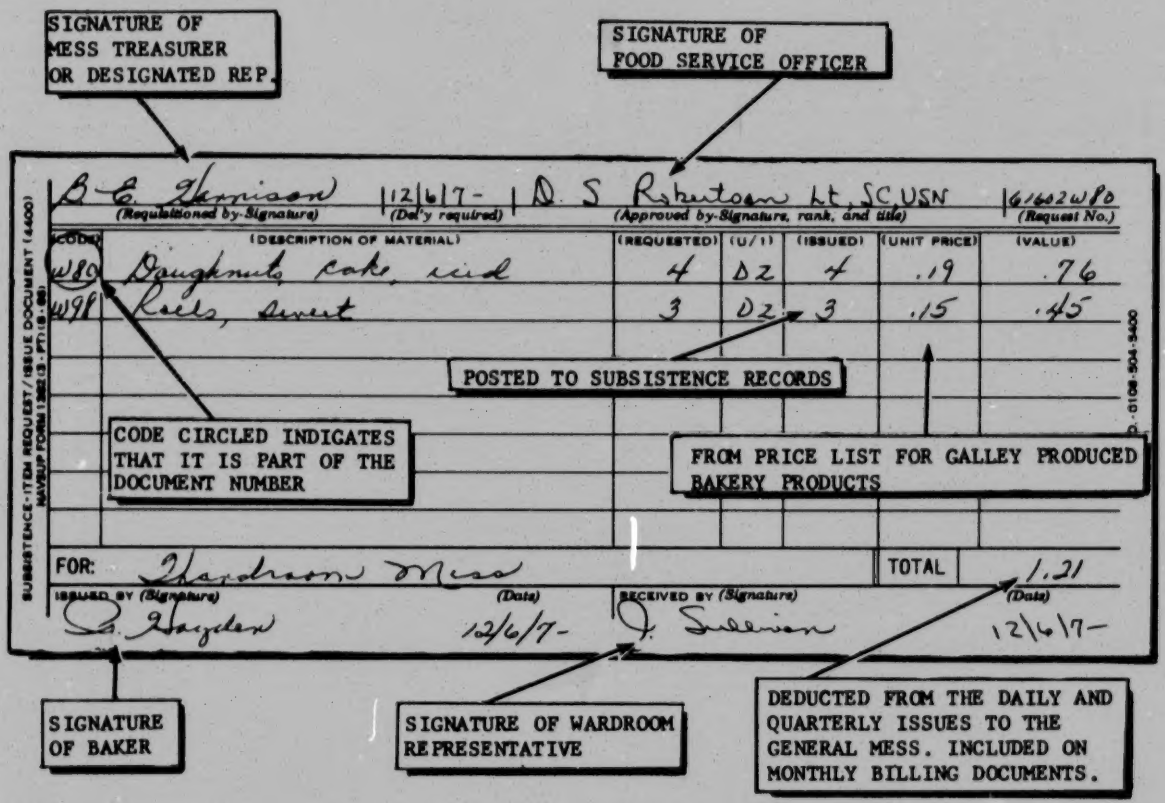


90.43

Figure 8-6.—Sale of galley baked products.

For example, beef, boneless, 6-way, Oven Roast, to be used by the wardroom, is worth 130 percent of the last receipt unit price.

Suppose the unit price of beef, boneless, 6-way Oven Roast, is $.54 per pound. The Oven Roast must then be sold for $.54 x 130 = $.7020 per pound.

$$\begin{array}{r} 1.30 \\ .54 \\ \hline 520 \\ 650 \\ \hline .7020 \end{array} \qquad (130\%)$$

Rounded off, the answer becomes $.70, in accordance with NAVSUP P-486.

The ground beef patties must be sold for $.54 x .60 = $.32 per pound.

$$\begin{array}{r} .60 \\ .54 \\ \hline 240 \\ 300 \\ \hline .3240 \end{array}$$

Rounded off the answer becomes $.32, in accordance with NAVSUP P-486.

Beef, Boneless, Fabricated, 5-Way (Type III)

Categories	Number of Cases	Percent of Unit price
Grill steaks (portion cut)	3	150
Oven roasts	2	115
Swiss steaks (portion cut)	2 Swiss steak or 1 Swiss steak	90
Pot roasts	1 Pot roast or 2 Pot roast	75
Ground beef	2	40

A unit of 5-way (Type III) beef weighs approximately 250 pounds consisting of 10 cases, weighing 25 pounds per case.

Veal, Boneless, 3-Way

A unit of 3-way boneless veal weighs approximately 400 pounds consisting of 8 cases, weighing a maximum of 50 pounds each as follows:

Categories	Number of Cases
Slices (cutlet style)	3
Roasts	2
Ground	3

Activities that are feeding less than 150 people may requisition a 200 pound unit provided in the following ratio:

Categories	Number of Cases
Slices (cutlet style)	1 or 2
Roasts	1
Ground	2 or 1

Sale of individual categories may be made, provided the general mess can utilize the unbalanced portions of complete units. The percentages shown should be applied to the last receipt price to arrive at the sale price for a particular category:

Categories	Percent of Unit	Percent of Unit price for Sale
Slices (cutlet style)	37 minimum	135
Roasts	25 minimum	130
Ground	38 maximum	50

SALE OF FOODS OTHER THAN GBP AND MEAT

When food items are sold or transferred to organizations outside the Federal Government of the United States or to individuals, a surcharge is collected in order to recover all Government costs. A 5 percent surcharge is applied to sales to individuals who are authorized patrons of commissary stores and a 10 percent surcharge to other sales as indicated in the chart (See fig. 8-7.) The surcharge is the total value of each sale and is listed as a separate line item on the billing document.

INVOICING SALES TO PRIVATE MESSES

Monthly, a statement is prepared by the food service officer for each mess covering sales of food items. The total money value of each statement is entered on the Record of Receipts and Expenditures–expenditure side (NAVSUP Form 367). Then at the end of the accounting period, the value of the GBP sold (as reflected on the three monthly invoices) should be deducted from the NAVSUP Form 1059-1C which summarizes issues to the general mess. The monthly statement for sale of food items serves as the bill which is presented to the mess treasurer not later than the sixth day of the following month.

The food service officer collects from the mess treasurer the total amount shown on the invoice and acknowledges receipt by signing the mess treasurer's Cash Receipt Book no later than the tenth day of the month following the period covered.

The funds so collected are deposited with the disbursing officer.

CATEGORY	APPROVING AUTHORITY	SUR-CHARGE	ACCES-SORIAL CHARGE	REMARKS
Activities of the Army, Air Force, Marine Corps and Coast Guard	Commanding officer	None	None	
American National Red Cross at naval activities in Alaska and Hawaii and outside the United States	Naval district commandant or overseas area commander	10%	Yes	Items may be used only for food service in local Red Cross canteens and will not be transferred nor resold.
Authorized contract messes	Commander, Naval Supply Systems Command	10%	Yes	
Civilian cafeterias at military activities	In Alaska and Hawaii and outside the United States: Naval district commandant or overseas area commander	10%	Yes	Authorized only when commercial sources are not available or when it is impracticable to procure items from commercial sources without impairing the efficient operation of the military activity.
	Inside the United States except Alaska and Hawaii: Naval Supply Systems Command	10%	Yes	
Foreign naval vessels and foreign military aircraft	Commanding officer	None	Yes	
Individuals who are authorized patrons of resale activities	In Alaska and Hawaii and outside the United States: Naval district commandants or overseas area commanders	5%	None	Granted only when commissary store facilities are not within a reasonable distance. A copy of each authorization will be furnished to the Navy Fleet Material Support Office.
	Inside the United States except Alaska and Hawaii: Naval Supply Systems Command	5%	None	Requests will be forwarded via the normal military chain of command. Sales will not be made to individuals at Navy activities having commissary stores.

90.15

Figure 8-7.—Authorized sale of subsistence excluding authorized messes.

CATEGORY	APPROVING AUTHORITY	SUR-CHARGE	ACCES-SORIAL CHARGE	REMARKS
Distressed ships and aircraft of the United States and of foreign states at peace with the United States	Senior officer present	10%	Yes	Sales may be made to ships and aircraft in distress or needing supplies and having no other immediate source.
Navy and Marine Corps exchanges	Commandant of a naval district, Chief of Naval Air Training, Commander, Amphibious Training Command, or the overseas area commander, when items are not available conveniently from commercial sources.	None	None	Items may be used for food service in Navy and Marine Corps exchanges and for resale in exchanges authorized to operate grocery sections.
Other government departments	Commanding officer	None	Yes	

Figure 8-7.—Authorized sale of subsistence excluding authorized messes—Continued.

SALES TO OTHER ACTIVITIES

Afloat, the general mess may be called upon to sell food items to merchant ships, the American National Red Cross, foreign governments, or foreign ships of war.

The Naval district commandant or overseas area commander and the senior officer present must approve of any sale of food items to the American Red Cross and merchant ships respectively. Sales to foreign governments and foreign ships of war are not permitted without specific authority of the Navy Department, except that in emergency circumstances, sales may be made to foreign ships of war as provided by *Navy Regulations*.

SALE OF MEALS

Within certain restrictions as prescribed by NAVSUP P-486, your commanding officer may authorize sale of meals to officers, to civilian employees of the armed services, and to civilian employees of private contractors who are performing work at a naval activity.

For example, if the officers aboard your ship are subsisted from the general mess, they must pay individually, either on a cash or credit basis for the meals actually consumed. During at sea periods officers subsisted from the general mess are required to pay for three meals per day whether food is consumed at regular meal times or in the form of snacks at other times.

The charges and surcharges for breakfast, dinner, and supper vary from time to time for different categories of personnel. Surcharges are promulgated by Naval Supply Systems Command instructions and applied to meals, or any part thereof, purchased from the general mess by officers and civilians.

A daily record of cash sales containing the following information is kept by a cashier designated in writing by the food service officer.

- Total number of meals sold, broken down by breakfasts, dinners and suppers.

- Total personnel purchasing meals, broken down by officer, enlisted, and civilian.
- Total cash received, broken down by the basic meal charge and applicable surcharges.
- Cash overage or shortage.

The meal record, together with the record of meals sold on a credit basis, should be used to substantiate sales from the general mess and the ration credit claimed and should be audited by the collection agent and reconciled at the time cash is collected. The food service officer should inspect the meal record at least weekly to ensure that an audit is made when cash is collected.

At the end of the month and when general mess returns are submitted upon relief of the accountable officer, the executive or personnel officer provides the food service officer with an original and one copy of a summary monthly Ration Report (NAVSUP Form 27) for the past month. The food service officer, upon receipt of the NAVSUP Form 27, enters the figure for the total ration credit for all meals sold for cash and forwards the original to the Navy Subsistence Office.

When meals are sold on a cash basis, the food service officer designates in writing a cashier or cashiers to receive payment for meals sold. The mess cashier ashore also may be assigned responsibility for making the head count. Collections and subsequent deposits of funds collected from the cashier may be made by the following persons:

- Food service officer when assigned as accountable officer.
- Collection agent or authorized custodian when appointed to an established position. The food service officer may designate an individual to be a collection agent or an authorized custodian and appoint him to an established position in accordance with *Navy Comptroller Manual*. Mess cashiers or the food service officer cannot be designated as collection agents. Cash received from the cashier should be receipted in the Cash Receipt Book (NAVSUP Form 470) by the person collecting the cash. The NAVSUP Form 1046 may be used in lieu of Form 470 when the only type of sale transaction is for meals sold from the general mess on a credit basis.

On or before the last day of the month and upon relief of the food service officer or commanding officer aboard ships without a Supply Corps officer, cash received for sale of meals from the general mess is transferred to a disbursing officer on a NAVSUP Form 1327.

HANDLING OF CASH

At the end of each month and upon relief of the food service officer, cash received for sale of meals from the general mess is transferred to a disbursing officer on a NAVSUP 1327.

If your commanding officer authorizes sales of meals on a credit basis from the general mess, a NAVSUP Form 1046 (Sale of General Mess Meals) is maintained. Note in figure 8-8 that each person purchasing meals, initials in blocks indicating breakfast (B), dinner (D), and supper (S), as applicable whenever he eats in the general mess.

At the option of the commanding officer, a mess steward is assigned the duty of maintaining the NAVSUP Form 1046. The steward places a check mark in the appropriate block opposite each name to indicate consumption of a meal. The form is posted in a conspicuous location where it can be visually inspected by mess members. At the end of each month, each mess member signs in the name block to acknowledge approval of the meal tally.

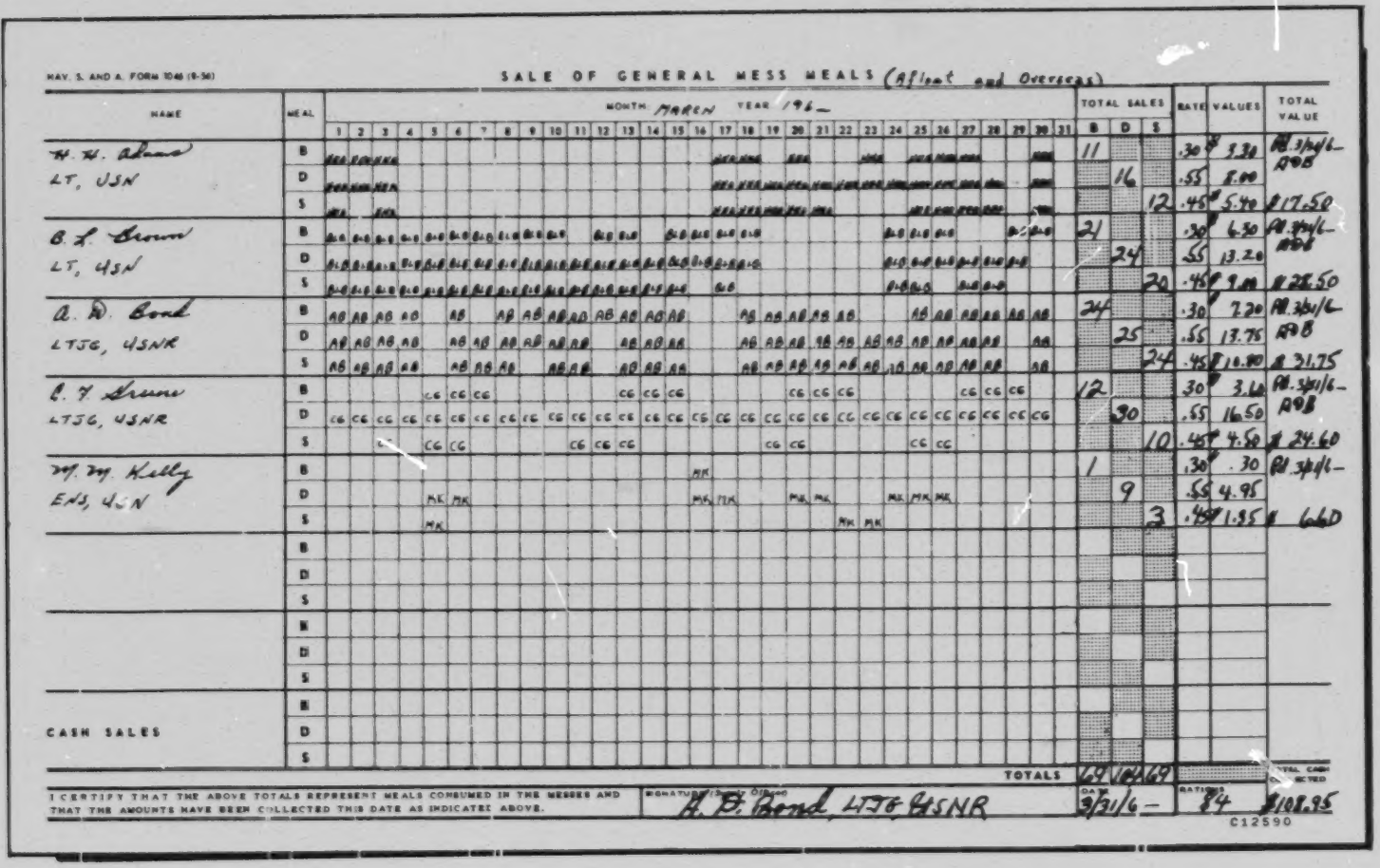
Cash should be collected for all meals sold on a credit basis normally within 5 days following the month in which the meals were sold.

The food service officer furnishes a receipt for the cash paid. The Cash Receipt Certificate (NAVCOMPT Form 2114) may be used as a receipt form by marking out the line "for which I hold myself accountable to the Treasurer of the United States of America."

Note that your food service officer signs the TOTAL deposited with the disbursing officer.

ISSUE AND SALE OF SPECIAL MEALS

The term "special meals" covers flight meals, intransit meals, boat meals, and bag lunches,



NAV. S. AND A. FORM 1046 (8-56)

SALE OF GENERAL MESS MEALS (Afloat and Overseas)

MONTH MARCH YEAR 196—

NAME	MEAL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL SALES B	D	S	RATE	VALUES	TOTAL VALUE
H. H. Adams LT, USN	B																																11			.30	$ 3.30	Rl. 3/31/6- ADB
	D																																	16		.55	8.80	
	S																																		12	.45	$ 5.40	$ 17.50
B. L. Brown LT, USN	B																																21			.30	6.30	Rl. 3/31/6- ADB
	D																																	24		.55	13.20	
	S																																		20	.45	$ 9.00	$ 28.50
A. D. Bond LTJG, USNR	B																																24			.30	7.20	Rl. 3/31/6- ADB
	D																																	25		.55	13.75	
	S																																		24	.45	$ 10.80	$ 31.75
C. F. Brown LTJG, USNR	B																																12			.30	3.60	Rl. 3/31/6- ADB
	D																																	30		.55	16.50	
	S																																		10	.45	$ 4.50	$ 24.60
M. M. Kelly ENS, USN	B																																1			.30	.30	Rl. 3/31/6-
	D																																	9		.55	4.95	
	S																																		3	.45	$ 1.35	$ 6.60
	B																																					
	D																																					
	S																																					
	B																																					
	D																																					
	S																																					
	B																																					
	D																																					
	S																																					
CASH SALES	B																																					
	D																																					
	S																																					
																																	TOTALS	69	162	69			

I CERTIFY THAT THE ABOVE TOTALS REPRESENT MEALS CONSUMED IN THE MESSES AND THAT THE AMOUNTS HAVE BEEN COLLECTED THIS DATE AS INDICATED ABOVE.

SIGNATURE (Signing Officer) A. D. Bond, LTJG USNR

DATE 3/31/6-

RATIONS 84

TOTAL CASH COLLECTED $108.95

C12590

66.27

Figure 8-8.—Record of meals sold from the general mess on credit basis.

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frozen flight meals, individual; and cooked or uncooked bulk food items issued for consumption aboard aircraft, small craft, or at a duty station away from the general mess.

The general mess prepares the special meals. The air terminal officer, the squadron duty officer, or the officer exercising operation control of small craft is responsible for determining the eligibility of each person to receive special meals, whether sold for cash or issued in kind, and for maintaining substantiating vouchers.

Food items which are authorized for special meals are contained in the *Federal Supply Catalog*, Federal Supply Classification Group 89, Subsistence. The cost of food items used in the preparation of special meals is promulgated quarterly by the Navy Subsistence Office through their fixed price list.

Nonfood items in the nature of paper cups, bags, and boxes may also be used for the preparation of these meals. Items of this type should be charged to the maintenance and operating allotment of the requiring activity and should not be included in the cost of the special meals.

Personnel Entitled to Flight Meals Without Charge

Enlisted personnel who are entitled to meals at Government expense are issued flight meals at no expense. An officer or chief petty officer certifies on the NAVSUP Form 340 the eligibility of United States enlisted crew members and passengers to receive flight meals without charge. He should list the name of each individual, meal pass number or travel order number, and an abbreviated name of the activity to which the person is assigned. Control should be established to ensure that flight meals are issued at no expense only to those personnel outlined below:

Personnel entitled to flight meals without charge are limited to the following:

- Enlisted personnel of the United States armed services traveling under individual or group travel orders (orders to be endorsed in accordance with Joint Travel Regulations, Volume 1).
- Enlisted personnel of foreign governments (must complete and sign the Receipt for Flight Meals on the reverse of the NAVSUP Form 340).
- United States Coast Guard enlisted personnel and officers not receiving per diem.
- Naval Academy midshipment traveling under group travel orders not receiving per diem allowance (no certification is required since reimbursement is made at the departmental level).

Personnel Authorized to Purchase Flight Meals

Personnel authorized to purchase flight meals from the general mess will need a NAVSUP Form 340.

1. The following flight crew members and official observers can purchase flight meals:

- Officers and naval aviation cadets
- Enlisted personnel receiving a monetary ration allowance, including basic allowance for subsistence or commuted rations.
- Civilian Federal Government employees, including those under contract.

2. Passengers authorized to purchase flight meals include:

- Officers of the United States and foreign uniformed services (including reserve officers not receiving a subsistence allowance).
- Civilian employees, including those under contract.
- Naval aviation cadets.
- Dependents of military and civilian Federal Government employees.
- Naval Academy midshipmen in a leave or TAD status.
- Enlisted personnel of the uniformed services on leave rations or in a permissive travel status.

The charge for flight meals differs, depending on whether the personnel are on TAD, per diem orders, in leave status, or are dependents. These charges are promulgated quarterly by NSO.

BOAT MEALS

Enlisted personnel who are entitled to rations in kind and are unable to return to the general mess for a meal because of duty assignments as beach guards, boat crews, target repair parties, and so forth are entitled to boat meals at no charge. Navy enlisted personnel receiving commuted rations and officer personnel are required to pay cash for each boat meal received. Surcharges are not applicable.

INTRANSIT MEALS

Intransit meals are box meals prepared by the general mess for consumption by enlisted personnel of the military services in a group travel at no charge, when they cannot be fed in the general mess. Meals furnished to enlisted personnel of the other military services should be receipted for on the Special-Meal Request/Receipt (NAVSUP Form 340) and shall be billed for by the Navy Subsistence Office.

BAG LUNCHES

Bag lunches are authorized for issue to personnel entitled to rations in kind when assigned to duty that prevents them from returning to the general mess for a regular meal. When bag lunches are utilized, they are accounted for as regular general mess meals, or as special meals, whichever method is most administratively advantageous to the general mess.

REQUEST PROCEDURES

The operations officer, squadron duty officer, or officers exercising operational control of the flight, small craft, or group travel operation prepares, in triplicate, the Special-Meal Request/Receipt (NAVSUP Form 340).

One signed copy of the Form 340 is forwarded to the food service officer at least 3 hours prior to the time the special meals are to be picked up from the food service office. When detailed information about categories of personnel requiring special meals is not immediately available, the copy may show only the total numbers of meals requested.

When circumstances prevent the submission of an advance copy of the NAVSUP Form 340, an officer may request special meals by telephone or other convenient communications media.

Special meals are not to be issued prior to the receipt of a signed request document.

COLLECTION OF PAYMENT

The requesting officer accounts for all special meals received by one of the following methods:

- Obtains cash payment in the amounts prescribed by Naval Supply Systems Command instructions;
- Certification by an officer or chief petty officer that personnel are entitled to meals without charge. A list of names, meal pass or travel order numbers, and the activities where assigned are provided to support the certification;
- Signed Receipt for Flight Meals (on reverse of NAVSUP Form 340) from foreign enlisted personnel;
- Endorsement of orders in accordance with Joint Travel Regulations, Volume 1.

COMPLETION OF FORM 340

The original NAVSUP From 340 should be completed showing the breakdown of special meals requested along with the signatures of foreign personnel on the reverse, and provided to the food service officer or representative with all cash collected at the time of pickup of the meals. If the signatures of all foreign personnel cannot be obtained at the time of pickup, the signatures and then obtained on a supplementary Receipt for Flight Meals and forwarded to the food service officer before the aircraft

departs. The original NAVSUP Form 340 should be annotated as follows:

"Supplementary Receipt for Flight Meals will follow."

ISSUE PROCEDURES

The food service officer ensures preparation of only the number of special meals requested on the signed copy of the NAVSUP Form 340 prepared by the requesting officer.

At the time of pickup, the food service officer or his representative verifies the completed original NAVSUP Form 340 with the cash collected, and acknowledges receipt of the cash on the working copy of the NAVSUP Form 340. The receipted copy is returned to the requesting officer with the special meals. Receipt is obtained from the requesting officer on the NAVSUP Form 340 when special meals are picked up. All meals issued without charge are justified with a signed certification of entitlement to flight meals or a receipt for flight meals. Officers of the Coast Guard that are issued special meals at no charge are not required to certify their entitlement.

The original of the NAVSUP Form 340 with the signed certificate is retained by the food service officer for preparation of the monthly Special Meals Report (NAVSUP Form 1340), and for posting to the Report of Subsistence Sales (NAVSUP Form 1327). Signatures of foreign personnel on the reverse of NAVSUP Forms 340 are retained for one year to substantiate billings to foreign governments.

RETURN OF SPECIAL MEALS

When a flight or operation is canceled or other valid circumstances preclude the use of special meals requested and prepared, they are returned to the food service office. Special meals may not be returned for credit if more than three hours have elapsed since they were issued. Return of cash, for unused special meals previously paid for in cash, is authorized only if they are returned before the three hours have elapsed.

Refunds are made by the food service officer or his representative only upon receipt of a Special-Meal Request/Receipt (NAVSUP Form 340) prepared by the officer signing the original request for the meals. The request should have the notation "Returned for credit" clearly indicated on the original.

Components of unused returned special meals should be reused when possible. They need not be taken up on stock and financial records.

RECORDS AND ACCOUNTING

When 10 or less special meals are issued during an accounting period, they are accounted for in the same manner as regular general mess meals. When personnel in a flight status are fed in the general mess or flight mess, they are accounted for in the same manner as supernumeraries in the general mess.

Subsistence-item Request/Issue Document (NAVSUP Form 1282), or the Subsistence Requisition Document (NAVSUP Forms 1059A, B and C) and the Subsistence Report (NAVSUP Forms 1059-1A, 1B, and 1C is used by the food service officer to record the quantity and value of food items required in the preparation of special meals. The issue document should be priced and extended, at the time of issue, using fixed prices. The quantity issued is posted as an expenditure in the column "Other" of the Subsistence Ledger (NAVSUP Form 335). The issue document is then retained by the food service officer pending preparation of the monthly Special Meals Report (NAVSUP Form 1340), discussed later in this chapter. Issues of food items are charged to the appropriation, Military Personnel, Navy, subhead .3140 and functional accounts 73110 and 73160 for ashore activities, and 73170 for afloat activities.

PREPARATION OF SPECIAL MEALS REPORT

A NAVSUP Form 1340 (See fig. 8-9), prepared in duplicate, is used to report the number of special meals issued during the month and the cost of food items used in the preparation of special meals (the value of all documents

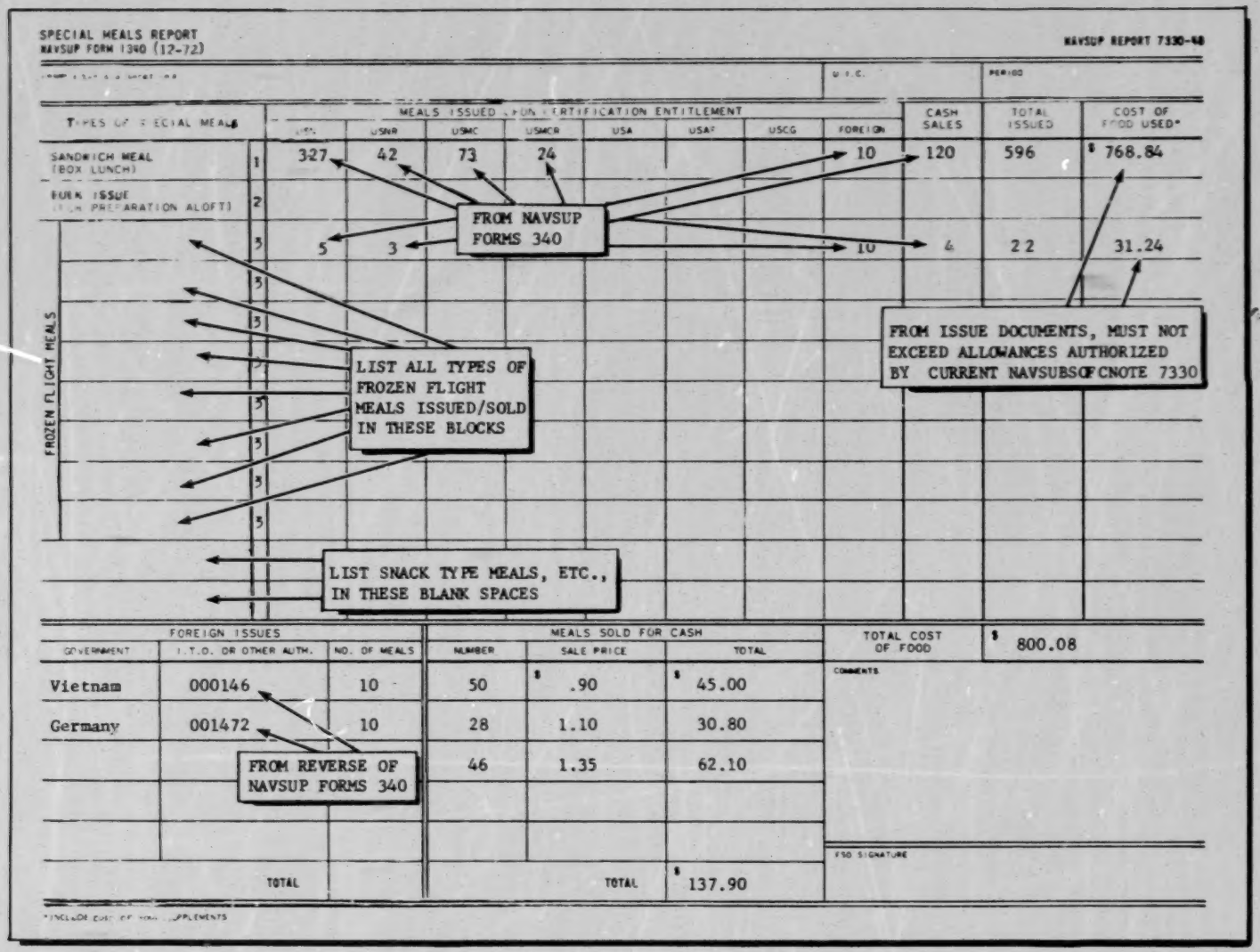

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Figure 8-9.—Preparation of Special Meals Report (NAVSUP Form 1340).

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prepared for issue of food items used in the preparation of special meals during the month). This value is entered in the "Cost of food used" column. The cost of supplemental food items may be divided among the meals with which they were served. The NAVSUP Form 1340 should be completed showing the total numbers of meals issued upon certification of entitlement to each government agency and to foreign enlisted personnel at government expense. This information is taken from the Special-Meal Request/Receipt (NAVSUP Forms 340) processed during the period covered by the NAVSUP Form 1340. The foreign government and invitational travel order numbers of foreign enlisted personnel under the Military Assistance Program are shown for foreign issues, and are taken from the Receipt for Flight Meals on the reverse side of NAVSUP Forms 340 for the period being reported. The type of aircraft or small craft and its serial or hull number is shown in the "Comment" block when applicable. The food service officer signs the NAVSUP Form 1340 certifying that the special meals shown thereon were issued. The total value of food items used in preparation of special meals during each accounting period is then entered on the balance sheet section of the General Mess Operating Statement (NAVSUP Form 45) opposite the caption "Special meals" under "Expenditures." The original of the NAVSUP Form 1340 is submitted monthly to the Navy Subsistence Office along with the Ration Report (NAVSUP Form 27) and the Report of Subsistence Sales (NAVSUP Form 1327). The copy is retained for posting the Record of Receipts and Expenditures (NAVSUP Form 367) and preparation of the quarterly NAVSUP Form 45.

REPORTING GENERAL MESS SALES

Food service officers should use the Report of Subsistence Sales (NAVSUP Form 1327) to document and report:

- Sales of general mess meals
- Sales of special meals
- Surcharges on general mess and special meals
- Sales of food items, including galley produced bakery products.

A Requisition and Invoice/Shipping Document (DD Form 1149) should be used to document and report surcharges on food items.

The NAVSUP Form 1327 (See fig. 8-10) is prepared by the food service officer in an original and 6 copies. The report period and the activity name, address, and unit identification code are entered at the top of the form. Further information on preparation of NAVSUP Form 1327 is contained in NAVSUP P-486.

If there is no disbursing officer available and funds in the custody of the food service officer cannot be deposited on or before the last day of the month, a Report of Subsistence Sales (NAVSUP Form 1327) is prepared in an original and one copy by the food service officer. The report is then signed by the food service officer, and a signed copy is forwarded to the Navy Subsistence Office with the monthly Ration Report (NAVSUP Form 27). The original is retained by the food service officer.

INVENTORIES

Inventories are taken by the food service officer and the responsible custodian of each storage space. However, there is a lot of work to be done by the Commissaryman in charge of the general mess prior to the actual count. You must inspect all dry subsistence storerooms and refrigerated spaces to ensure that items are neatly stacked and with labels or weight markings visible, and right side up. Also, take inventory of items at random during the accounting period. This will let your men know that you are closely supervising all issues and will reduce the number of errors found on Stock Tally Cards.

The NAVSUP Form 1059-1A, 1B, and 1C will be made out in an original only and are recorded in ink. Errors are lined through (never erased) and initialed by the persons responsible for the inventory. Each page of the rough inventory is signed by the food service officer and the persons responsible for the storage areas. Issues must not be made during inventory except in emergencies.

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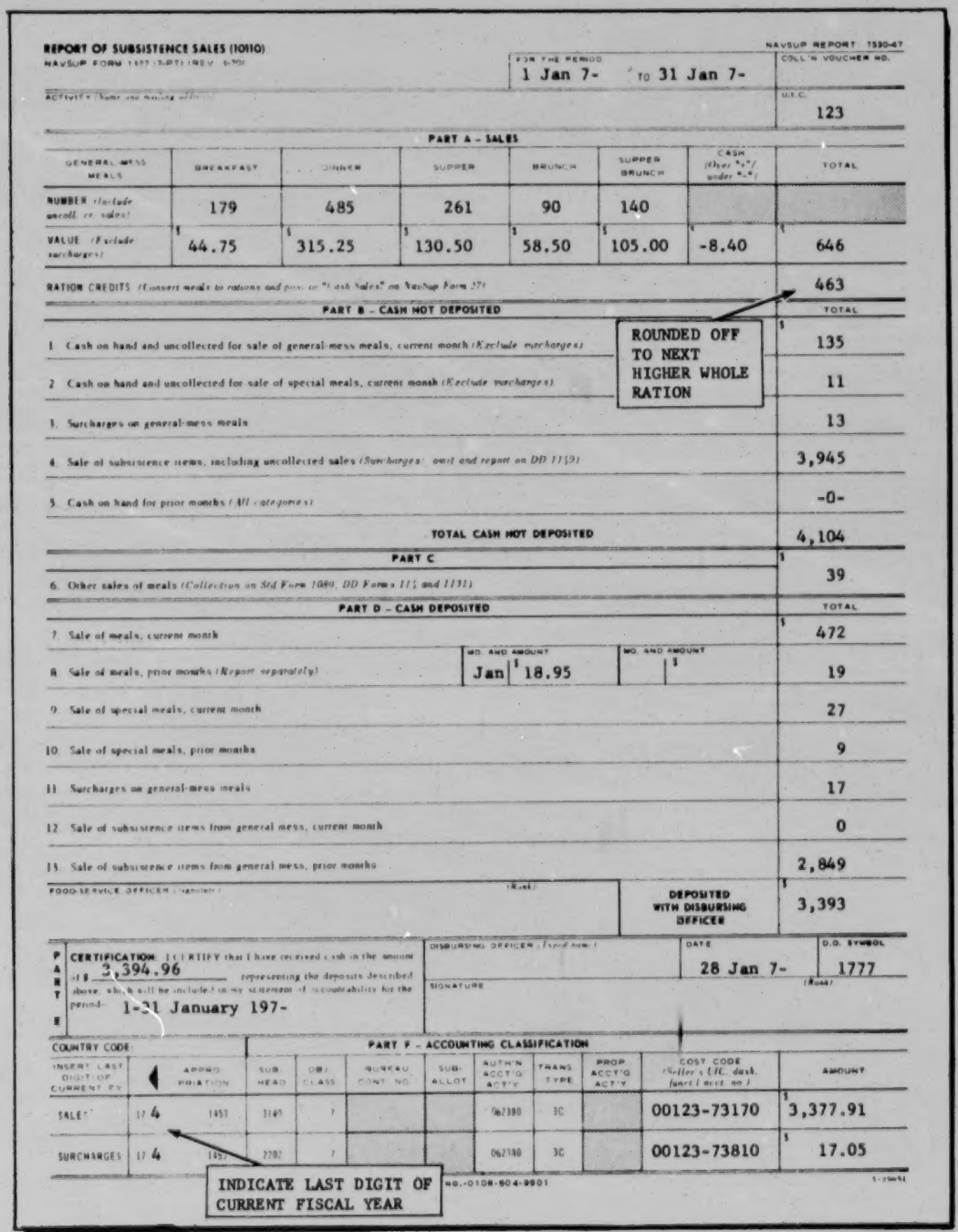

REPORT OF SUBSISTENCE SALES (10110)
NAVSUP FORM 1327 (SPT) (REV 6-70)

NAVSUP REPORT 7330-47

ACTIVITY (Name and mailing address)

FOR THE PERIOD: 1 Jan 7- TO 31 Jan 7-

COLL'N VOUCHER NO.: 123

U.I.C.:

PART A – SALES

GENERAL MESS MEALS	BREAKFAST	DINNER	SUPPER	BRUNCH	SUPPER BRUNCH	CASH (Over "+"/ under "-")	TOTAL
NUMBER (Include uncoll. cr. sales)	179	485	261	90	140		
VALUE (Exclude surcharges)	$ 44.75	$ 315.25	$ 130.50	$ 58.50	$ 105.00	$ -8.40	$ 646

RATION CREDITS (Convert meals to rations and post to "Cash Sales" on NavSup Form 27) 463

PART B – CASH NOT DEPOSITED

	TOTAL
1. Cash on hand and uncollected for sale of general-mess meals, current month (Exclude surcharges)	$ 135
2. Cash on hand and uncollected for sale of special meals, current month (Exclude surcharges)	11
3. Surcharges on general-mess meals	13
4. Sale of subsistence items, including uncollected sales (Surcharges: omit and report on DD 1139)	3,945
5. Cash on hand for prior months (All categories)	-0-
TOTAL CASH NOT DEPOSITED	4,104

ROUNDED OFF TO NEXT HIGHER WHOLE RATION

PART C

6. Other sales of meals (Collection on Std Form 1080, DD Forms 1131 and 1131)	$ 39

PART D – CASH DEPOSITED

	MO. AND AMOUNT	MO. AND AMOUNT	TOTAL
7. Sale of meals, current month			$ 472
8. Sale of meals, prior months (Report separately)	Jan $ 18.95	$	19
9. Sale of special meals, current month			27
10. Sale of special meals, prior months			9
11. Surcharges on general-mess meals			17
12. Sale of subsistence items from general mess, current month			0
13. Sale of subsistence items from general mess, prior months			2,849
FOOD SERVICE OFFICER (Typed name) (Rank)		DEPOSITED WITH DISBURSING OFFICER	$ 3,393

PART E

CERTIFICATION. I CERTIFY that I have received cash in the amount of $ 3,394.96 representing the deposits described above, which will be included in my statement of accountability for the period 1-31 January 197-

DISBURSING OFFICER (Typed name) (Rank)

DATE: 28 Jan 7-

D.O. SYMBOL: 1777

SIGNATURE

COUNTRY CODE:

PART F – ACCOUNTING CLASSIFICATION

INSERT LAST DIGIT OF CURRENT FY	APPROPRIATION	SUB HEAD	OBJ CLASS	BUREAU CONT NO	SUB-ALLOT	AUTH'N ACCT'G ACT'Y	TRANS TYPE	PROP ACCT'G ACT'Y	COST CODE (Seller's UIC, dept, funct'l acct no.)	AMOUNT
SALES	17 4 1453	3140	7			062380	3C		00123-73170	$ 3,377.91
SURCHARGES	17 4 1453	2282	7			062380	3C		00123-73810	$ 17.05

INDICATE LAST DIGIT OF CURRENT FISCAL YEAR

NO. 0108-504-9901

66.57

Figure 8-10.–Preparation of Report of Subsistence Sales (NAVSUP Form 1327).

After the inventory has been completed, the rough inventory is compared with the balances on the Subsistence Ledger (NAVSUP Form 335). A list is made of discrepancies between inventory quantities and on hand balances and these must be investigated. Required corrections are made on the rough inventory sheets and initialed by each person whose name appears on the inventory sheets. After all corrections have been made, the inventory is recapped in duplicate on NAVSUP Forms 1059-1A, 1B, and 1C. The food service officer compares the smooth recapped inventory with the rough inventory and signs the smooth inventory. The rough inventory sheets are placed in the accountability file until the next inventory has been completed, after which they may be destroyed. The original and duplicate of the smooth inventory are retained by the food service officer and filed with retained returns except upon relief of the food service officer when a copy of the smooth inventory is sent to the Navy Subsistence Office. The duplicate copy is used for posting inventory quantities to the NAVSUP Forms 335 and 209; the total value of the inventory is posted to the NAVSUP Form 367. The duplicate is furnished to the Storekeeper having custody of the stock for posting. When posting has been accomplished, the Storekeeper returns the certified duplicate to the food service officer for verification. After the original has been verified with the duplicate copy of the inventory, the duplicate may be destroyed if no overissue has occurred during the accounting period. When an overissue has occurred, the original is forwarded with the subsistence returns to the Navy Subsistence Office.

The duplicate is retained by the food service officer.

The food service officer must investigate and initial all end of quarter inventory adjustements shown on the NAVSUP Form 335 that are in excess of 5 percent of total expenditures for the items. The cause for the discrepancy must be determined, and corrective action should be taken to prevent recurrence. Unreconciled differences between stock balance on the NAVSUP Form 335 and the actual physical inventory should be absorbed in the issues to the general mess by posting the difference, plus or minus, to the general mess issue column of the NAVSUP Form 335, marked "inventory adjustment."

A constant inventory analysis program should be maintained to assure the utilization of food stocks to prevent overage or expiration of shelf life expectancy.

SURVEYS

The survey procedure is the means by which you can expend from your records material which is damaged, deteriorated, lost, or stolen.

In the case of material, it provides for a review of its condition, the cause of the existing condition, the responsibility therefor, and the recommendation for its disposition. The document upon which the survey is accomplished provides the authorization to expend the material from the records on which it is carried.

The details of the survey procedure follows:

- The supply officer or the food service officer initiates the request for survey on a Survey Request, Report and Expenditure (NAVSUP Form 154) and submits the form to the commanding officer.
- The commanding officer determines whether a formal or informal survey is required and will designate the officer or officers to make the survey. Under certain conditions a formal survey is required; in such cases a commissioned officer or a board of three officers appointed by the commanding officer should accomplish the survey. Usually, with food items, the commanding officer will determine that an informal survey is appropriate; in such cases the department head having custody of the material to be surveyed will conduct an informal survey.

A formal survey is made by either a commissioned officer or a board of three officers, one of whom and as many as practicable are commissioned officers. The following officers are not allowed to serve on a survey board for food items:

- The commanding officer,
- The supply officer,
- The food service officer.

LOSS WITHOUT SURVEY

Food items accounted for in appropriation, Military Personnel, Navy, may be expended without formal or informal survey when culpable responsibility is not involved and when:

- Material is short, damaged, or lost in shipment, and the value of the loss is less than $10 per receipt document.
- Food items are lost as a result of physical deterioration, damage in handling, fire, water, or other similar circumstances, and the value of the loss is $50 or less per line item. When the total loss of several items expended for the same reason exceeds $150, a survey is required.

When this happens, an Expenditure Log (Loss Without Survey) (NAVSUP Form 1334) should be maintained to itemize the types of losses which occur to material held in end use accounts. These entries are made in the NAVSUP Form 1334 in ink at the time of loss and signed by the food service officer. Each item entered in the Expenditure Log should be posted to the "Other" column of the Subsistence Ledger (NAVSUP Form 335) as occurring, and the balance on hand reduced accordingly.

Upon relief of the food service officer and the end of an accounting period, the Expenditure Log is closed and the "Total value" column is totaled. One money value only Requisition and Invoice/Shipping Document (DD Form 1149) is prepared for the total value of all entries made in the Expenditure Log during the accounting period. Aboard fleet ballistic missile submarines the Expenditure Log maintained for food items is recapped at the end of each patrol rather than at the end of the regular fiscal accounting period. Aboard ships without Supply Corps officers, the commanding officers signs the DD Form 1149. The value of the invoice is included in the entry opposite the "Surveys and loss without survey" caption in the "Expenditures" section of the NAVSUP Form 45 and a copy of the invoice is then forwarded along with the general mess returns to the Navy Subsistence Office.

The NAVSUP Form 1334 and a copy of the DD Form 1149 are retained by the food service officer for a period of one year, after which they may be destroyed. These records shall be made available to inspectors during the course of supply and general mess inspections and during internal audits.

CHAPTER 9

GENERAL MESS FINANCIAL RETURNS

One of your requirements for advancement to Commissaryman First or Chief is an understanding of the general mess accounting and reporting procedures prescribed by the Naval Supply Systems Command.

Navy general messes operated on a monetary ration allowance. This allowance is computed by using the quantitative food allowance prescribed by a Department of Defense Food Cost Index which is based on food items authorized by the Navy Ration Law. The general mess accounting system requires that a quantity record of receipts and expenditures be maintained for each food item carried. The system also requires that a record be maintained for posting the money value of receipts and expenditures. A third record is maintained for controlling the cost of the general mess ration. The value of food items consumed in the general mess is computed by using fixed unit prices distributed by the Navy Subsistence Office.

The procedures discussed in this chapter apply only to the accounting for food items at the general mess level. A close relationship between you and the Navy Subsistence Office should be maintained pertaining to any changes or bulletins that may occur. You should, if at all possible, try to get on the mailing list of Naval Supply Systems Command and the Navy Subsistence Office. This chapter is intended to help you find the answers to such questions as:

1. How should you prepare for an inventory?
2. How are the required records closed out?
3. How do you go about preparing and rendering returns?
4. What records and documents are retained by the food service officer?

FIXED PRICE LISTS AND DAILY MONETARY RATION RATES

The Navy Subsistence Office publishes quarterly a list of fixed prices and the monetary values of the basic daily allowance for dissemination. The fixed price list is used by all activities operating a general mess to determine the total cost of issues to the general mess. When a fixed price is not listed for an item, the last receipt invoice price is used. The fixed price list for sale of galley produced products is used by activities operating a general mess for pricing galley produced bakery products sold to private messes in accordance with NAVSUBSOFC Notice 7330. It is revised every three months as required by fluctuations in prices to the basic ingredients. The costs of galley produced bakery products which do not appear in the price list are based on the last receipt invoice prices for the basic ingredients.

INVENTORY REQUIREMENTS

Food items carried in end use appropriation, Military Personnel, Navy, aboard ships and in general mess issue rooms ashore are hereafter referred to as general mess stocks. General mess stocks of food items shall be inventoried by the food service officer as of the last day of each quarter and prior to the relief of the food service officer. At the end of each patrol period of fleet ballistic missile submarines and upon relief of the commanding officer of each crew (blue and gold), item inventories are prepared on the Subsistence Report (NAVSUP Form 1059-1A, 1B, and 1C). A copy of the inventory is submitted with the general mess returns only upon relief of

the food service officer of either of the individual crews (blue or gold). Copies of the inventories are not submitted at the end of each blue or gold patrol period. Aboard ships without Supply Corps officers, an inventory is taken prior to relief of the commanding officer. Frequent spot inventories are taken of fast moving and high value items as considered advisable, to maintain control of general mess operations.

INVENTORY PROCEDURES

In preparation for and prior to the inventory, all receipt and expenditure documents are posted to the Subsistence Ledger (NAVSUP Form 335), the Record of Receipts and Expenditures (NAVSUP Form 367), and the Stock Tally (NAVSUP Form 209), if used. Arrange all general mess stocks to facilitate counting; for example, by case lots or by date of pack.

DURING INVENTORY

The food service officer and, upon relief, both the officer being relieved and the relieving officer must take the inventory. Personnel assigned responsibility for general mess stocks must be present and participate in the inventory of their respective spaces. Separate rough inventories are taken of areas assigned to different individuals. Food items are not moved from one storage area to another area during the inventory, and the food service officer must ensure that no issue, transfer, or sale of food items is made from general mess stocks except in an emergency. When emergency expenditures occur, the inventory is adjusted and the adjustment is initialed by the persons taking the inventory.

RECORDING THE INVENTORY COUNTS

The rough inventory is recorded in ink on a Subsistence Report (NAVSUP Forms 1059-1A, 1B, and 1C). You may record the rough inventory in ink using the Subsistence Report. Only one original rough inventory is prepared. Errors and adjustments are lined out, not erased or obliterated, and corrections are initialed by the persons responsible for the inventory. Each page of the rough inventory is signed by the food service officer and the persons responsible for the storage areas. Figure 9-1 shows you where to sign a rough inventory.

AFTER INVENTORY

The rough inventory is then compared with the balances on the Subsistence Ledger (NAVSUP Form 335). A list is made of discrepancies between inventory quantities and the on hand balances, and these discrepancies are investigated. The required corrections are made to the rough inventory sheets and initialed by each person whose name appears on the inventory sheets. After all corections have been made, the inventory is recapped in duplicate on a Subsistence Report (NAVSUP Forms 1059-1A, 1B, and 1C). The food service officer then compares the smooth recapped inventory with the rough inventory and signs the smooth inventory. He then places the rough inventory sheets in the accoutability file until the next inventory has been completed, after which they are destroyed. The smooth inventory (in duplicate) is priced at the last receipt prices, extended and totaled. The original is retained by the food service officer and filed with the retained returns. The duplicate is used for posting to the NAVSUP Forms 209, 335, and 367. Inventory quantities are posted to the NAVSUP Forms 335 and 209. The total value of the inventory is posted to the NAVSUP Form 367. Aboard ships and activities holding bulk stocks in end use, the value of the inventory is posted as an expenditure. For activities holding stocks in the Navy Stock Account, the value of the inventory is transferred to the supply officer as a return to Navy Stock Account and is posted as a credit receipt. After posting is completed, the duplicate is used to prepare returns and is then destroyed.

ACTION UPON RELIEF OF FOOD SERVICE OFFICER

When the food service officer is relieved the officer being relieved and the relieving officer

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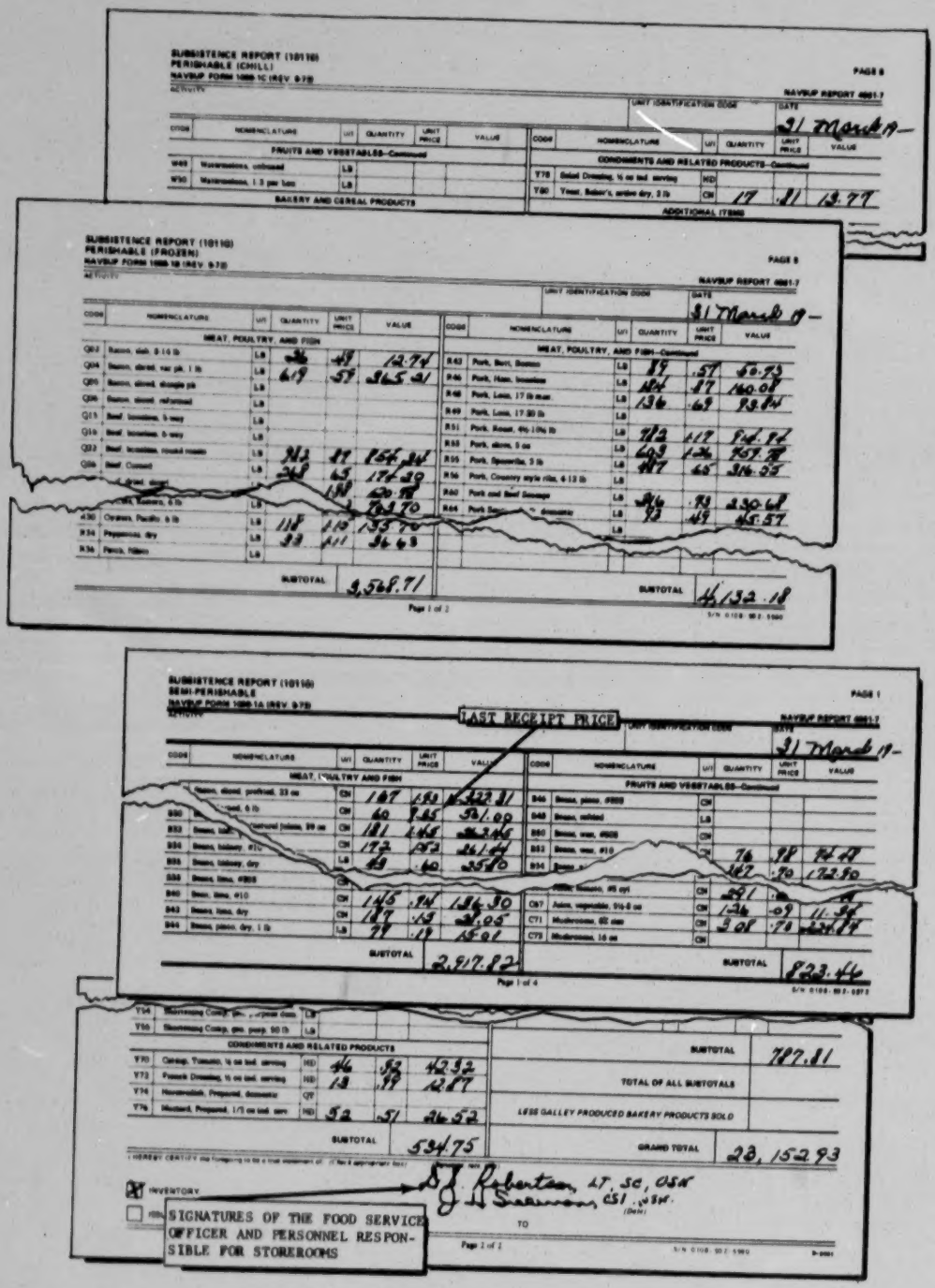

Figure 9-1.—Rough inventory.

48.29

sign the inventory to the effect that the quantities and values on hand are in agreement with the actual inventory and stock records. A copy of the smooth inventory is then forwarded to the Navy Subsistence Office as soon as possible after completion. All records, files and vouchers of the relieved officer are maintained by the relieving officer, who makes such adjustments or settlements as necessary. If he is not satisfied with the condition of the records, the relieving officer reports the facts immediately to the commanding officer, via the supply officer, for such action as is considered necessary prior to the assumption of his duties.

Aboard ships without Supply Corps officers, an inventory must be taken upon change of command with both the relieving and relieved commanding officers signing the inventory.

OPTIONAL INVENTORY

In the interest of reducing the workload at the end of each quarter, an optional inventory procedure is authorized to permit inventories to be taken at any time during the last month of the quarter except upon relief of the accountable officer. The inventory should be conducted during the latter part of the month, if possible. Take inventory when stocks are low for greater accuracy and more time for investigating discrepancies.

SUBSISTENCE LEDGER

After posting all receipt and expenditure documents to the Subsistence Ledger (NAVSUP Form 335), post the quantity of each food item on the closing inventory as the last entry to the "on hand" column.

INVENTORY ADJUSTMENTS

A comparison should be made between the running "On hand" balance on each NAVSUP Form 335 and the actual on hand quantity posted from the inventory. Your food service officer should investigate any difference in excess of 5 percent of the total expenditures during the accounting period, since recounts were made during the inventory of all items not in agreement. Look for mistakes in mathematical accuracy or issue controls and check security measures. Take action to correct the cause and prevent the recurrence of excessive difference. Any unreconciled difference between the recounted inventory and the rechecked on hand balance is posted to the "To G.M." column of the NAVSUP Form 335 annotated as "Inventory adjustment" as seen in figure 9-2. This can be either a plus or minus figure. The food service officer then initials all inventory adjustments in excess of 5 percent of the total expenditures during the accounting period.

SUBMARINE TENDERS

When specialty items are authorized for issue to submarines and small craft with 49 or less enlisted men on board a separate rough inventory is prepared. If there are gains in inventory of speciality food items, they are itemized on a Requisition and Invoice/Shipping Document (DD Form 1149) which is then posted as a receipt on the NAVSUP Form 335 and the Stock Tally (NAVSUP Form 209), and the Record of Receipts and Expenditures (NAVSUP Form 367). The value posted to the NAVSUP Form 367 is included in the entry on the General Mess Operating Statement (NAVSUP Form 45) opposite the caption "Receipts without charge". The original DD Form 1149 is forwarded with the returns submitted to the Navy Subsistence Office.

Losses of less than $50 per line item are itemized and expended on an Expenditure Log (Loss Without Survey) (NAVSUP Form 1334) and then posted to the NAVSUP Forms 335, 209, and 367. The value posted to the NAVSUP Form 367 is included in the entry opposite the "Survey and loss without survey" caption on the NAVSUP Form 45. The original of the NAVSUP Form 1334 is then forwarded to the Navy Subsistence Office with the returns. Losses of $50 or more per line items are surveyed on a Survey Request, Report and Expenditure document (NAVSUP Form 154). The original is then forwarded with the returns to the Navy Subsistence Office.

NAVSUP FORM 335 (REV 3-69)
S/N 0108-900-7303

SUBSISTENCE LEDGER (6442)

STOCK NO 8905-965-2128 ITEM Q58 Chicken, RTC, cut up

HIGH LIMIT 813 / LOW LIMIT 488 / UNIT OF ISSUE LB	19 MO	DAY	RECEIPTS	EXPENDITURES TO G M	EXPENDITURES OTHER	ON HAND
	3	1	Bal B F	570		600
	3	22		79		521
	3	29	200	96	25	600
	3	30		INV	4/31	600
			TOTAL	745		
19	4	1	B F			600
MO & DAY / *FIXED PRICE	4	3	200	75	12	713
1/1 .45	4	9		63	200	450
4/1 .43	4	20	250	96	5	599
	4	29		102		497
	5	10	250			747
	5	24		94	36	617
	5	29		15		602
	6	1	200			802
	6	8		60		742
19	6	15		88	38	616
MO & DAY / †REC PT PRICE	6	21	200	66		750
2/1 .46	6	30	STEP 2	92	23	635
4/20 .44	6	30	INV ADJ	15	INV 6/31	620
6/21 .45			TOTAL	766	STEP 1	
	7	1	B F			620
				STEP 3		

NOTE: Before turning to the next ledger page for closeout, record the last receipt unit price of the item in question in the "Unit Price" column of the NavSup Forms 1059-1A, -1B, -1C inventory document. When all subsistence ledger pages have been closed out, the inventory document will be ready for extension.

*Use to extend issues to General Mess

†Use to extend inventory and to price sales and transfers

CLOSING OUT THE SUBSISTENCE LEDGER

1. Post the quantity from the smooth inventory document to the "On Hand" column of the Subsistence Ledger.

2. Post as an inventory adjustment in the "To G.M." column the difference between the inventory figure and the previous figure in the "On Hand" column. The inventory adjustment (plus or minus) represents the difference between what was thought to be in the storeroom and what was actually there. By posting the figure to the "To G.M." column, the difference will either be added (+) to or subtracted (-) from the expenditures to the general mess.

3. After the inventory adjustment has been posted, total all the figures appearing in the "To G.M." column. This figure represents the total quantity of the item issued to the general mess during the quarter. Post to NavSup Forms 1059-1A, -1B, -1C quarterly recap; also record fixed price on the recap.

4. The total issues figure may be verified by running an adding machine tape: add the beginning inventory and all receipts, subtract all quantities in the "Other" columns, and subtract the ending inventory. The result will equal total issues figure if there are no mathematical errors on the form.

All subsistence ledgers are closed out in exactly the same manner. However, if the optional inventory procedure is being used during the last month of the quarter, follow steps 1 and 2 and then at the end of the quarter perform steps 3 and 4.

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Figure 9-2.—Closing out the subsistence ledger and inventory adjustment.

SUMMARY OF ISSUES TO THE GENERAL MESS

After making all inventory adjustments, a line is drawn below the last entry on each NAVSUP Form 335 and the issues to the general mess are totaled. The totals are then posted to the summary Subsistence Report (NAVSUP Forms 1059-1A, 1B, and 1C), (see fig. 9-3). When an inventory adjustment results in a credit issue, it is posted as a minus entry on the summary of issues to the general mess. The summary NAVSUP Forms 1059-1A, 1B, and 1C is priced and extended, using the current fixed unit prices, or last receipt unit price when a fixed price is not established, and the total value of issues to the general mess is computed. Afloat, the value of galley produced bakery products sold is inserted opposite the appropriate caption on Page 8 of NAVSUP Form 1059-1, and is deducted from the total issues to the general mess.

CLOSING AND REOPENING

When closing the Subsistence Ledger, draw a double line on each NAVSUP Form 335 below the total of issues to the general mess to indicate that the record is closed. When reopening the Subsistence Ledger, the inventory quantities that appear as the last entry in the "On hand" column are posted just below the double line as the first entry for the next accounting period.

CLOSING OUT THE NAVSUP FORM 367

The Record of Receipts and Expenditures (NAVSUP Form 367) is a money value only record. Transactions are recorded on the receipts side in "Date", "Source", "Document Number", and "Value" columns. Columns on the expenditure side are "Date", "Activity/Purpose", "Document Number", and "Value". The receipts and the expenditures should be equal when the 367 is closed out. Post inventory and price adjustment figures to the "Value" column of the expenditures side at the end of the accounting period.

SPECIAL MEALS

The total value of food items used in the preparation of special meals is posted monthly from the Special Meals Report (NAVSUP Form 1340) to the Record of Receipts and Expenditures (see fig. 9-4).

SURVEY AND LOSS WITHOUT SURVEY

The value of each survey expenditure is recorded as it occurs on an Expenditure Log (Loss Without Survey) (NAVSUP Form 1334). The total value of food items expended without survey is summarized and posted to the NAVSUP Form 367.

CLOSING INVENTORY AND ISSUES TO GENERAL MESS

The total value of general mess issues is posted to the NAVSUP Form 367 from the summary Subsistence Report (NAVSUP 1059-1A, 1B, and 1C. Transferred to the supply officer, the total value of the closing inventory is posted as a credit receipt by activities that maintain Navy Stock account food stocks. At activities authorized to account for food items in end use, the value of the closing inventory is posted as an expenditure on the "Expenditures" side of the NAVSUP Form 367.

PRICE ADJUSTMENTS

After you have posted all receipts and expenditures, the value of receipts and the value of expenditures are totaled. The difference, if any, is considered a price adjustment, and is posted to the "Value" column on the "Expenditures" side of the NAVSUP Form 367 as a plus or minus, to balance receipts and expenditures. If the total value of "Expenditures" is larger than the total value of "Receipts" the difference is posted as a minus "Price adjustment." While the price adjustment is the difference between the receipt unit prices and fixed unit prices of issues to the general mess, the price adjustment may

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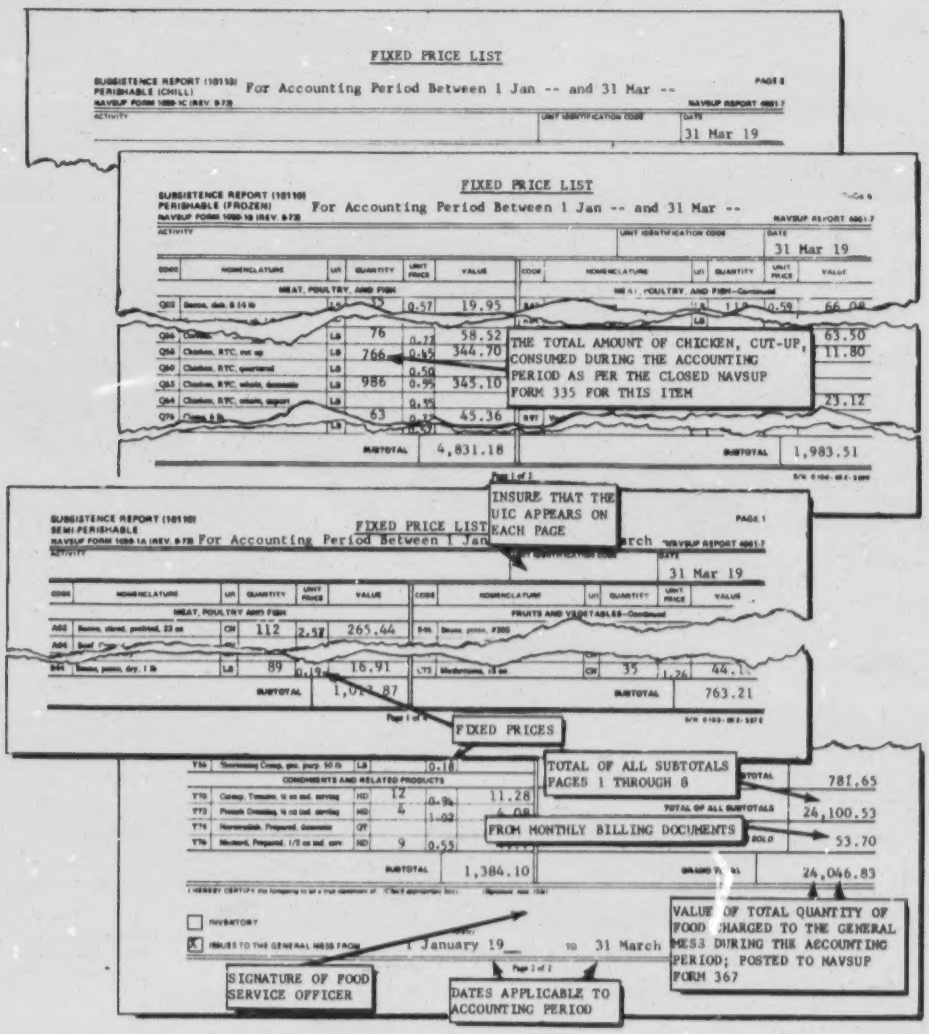
FIXED PRICE LIST
For Accounting Period Between 1 Jan -- and 31 Mar --
31 Mar 19
THE TOTAL AMOUNT OF CHICKEN, CUT-UP, CONSUMED DURING THE ACCOUNTING PERIOD AS PER THE CLOSED NAVSUP FORM 335 FOR THIS ITEM
INSURE THAT THE UIC APPEARS ON EACH PAGE
FIXED PRICES
TOTAL OF ALL SUBTOTALS PAGES 1 THROUGH 8
FROM MONTHLY BILLING DOCUMENTS
VALUE OF TOTAL QUANTITY OF FOOD CHARGED TO THE GENERAL MESS DURING THE ACCOUNTING PERIOD; POSTED TO NAVSUP FORM 367
SIGNATURE OF FOOD SERVICE OFFICER
DATES APPLICABLE TO ACCOUNTING PERIOD
1 January 19__ to 31 March

DETERMINING THE TOTAL VALUE OF ISSUES CHARGEABLE TO THE GENERAL MESS

1. After closing out each NavSup Form 335 transcribe the total issues from the "To G.M." column of each NavSup Form 335 to NavSup Forms 1059-1A, -1B, and -1C.
2. Price (at the fixed price), extend, and total the NavSupForms 1059-1A, -1B and -1C.
3. Add all the subtotals on NavSup Forms 1059-1A, -1B, -1C (Pages 1 through 8) and post on "TOTAL OF ALL SUBTOTALS" line on the NavSup Form 1059-1C (Page 8).
4. After the value of galley produced bakery products sold have been credited to the NavSup Form 1059-1C (Page 8), post to the "LESS GALLEY PRODUCED BAKERY PRODUCTS SOLD" line.
5. Post the "GRAND TOTAL" of the NavSup Form 1059-1C (Page 8) to the expenditure side of the NavSup Form 367 as the quarter's issues to the general mess.

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Figure 9-3.—Summary of issues to the general mess.

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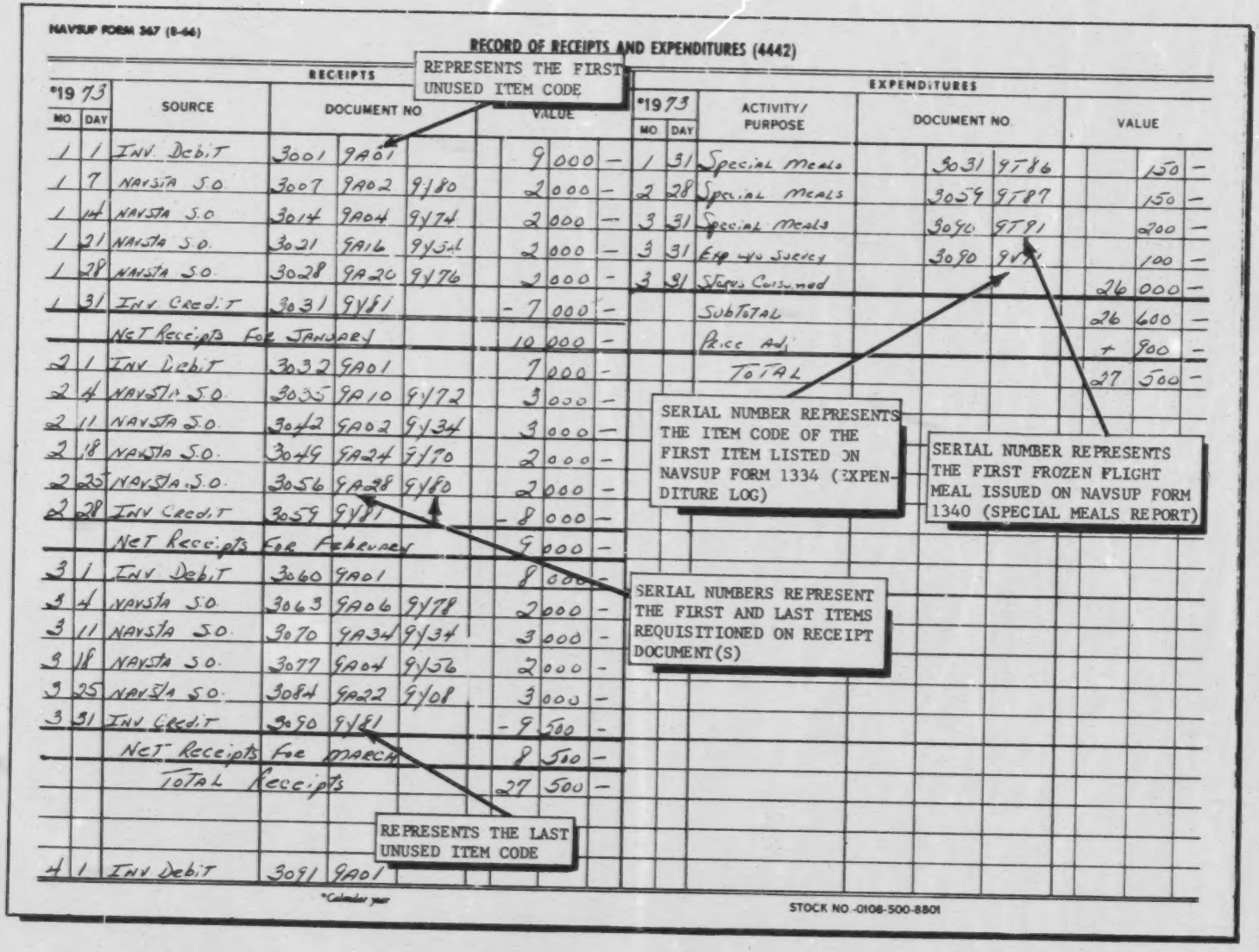

NAVSUP FORM 367 (8-66)
RECORD OF RECEIPTS AND EXPENDITURES (4442)
RECEIPTS
EXPENDITURES
*1973
MO
DAY
SOURCE
DOCUMENT NO
VALUE
ACTIVITY/ PURPOSE
REPRESENTS THE FIRST UNUSED ITEM CODE
SERIAL NUMBER REPRESENTS THE ITEM CODE OF THE FIRST ITEM LISTED ON NAVSUP FORM 1334 (EXPENDITURE LOG)
SERIAL NUMBER REPRESENTS THE FIRST FROZEN FLIGHT MEAL ISSUED ON NAVSUP FORM 1340 (SPECIAL MEALS REPORT)
SERIAL NUMBERS REPRESENT THE FIRST AND LAST ITEMS REQUISITIONED ON RECEIPT DOCUMENT(S)
REPRESENTS THE LAST UNUSED ITEM CODE
*Calendar year
STOCK NO -0108-500-8801

Figure 9-4.—Posting special meals to NAVSUP Form 367.

also include errors in posting the values of receipts, expenditures, and inventories. Therefore, be careful when posting receipt and expenditure transactions, and taking inventories, and be sure to use correct unit prices to preclude excessive price adjustments. If the value of your price adjustments exceeds 10 percent of the value of stores consumed, you must make a review to determine the cause. Review high cost items and high usage items first to ascertain the accuracy of receipt and expenditure transactions, pricing, and inventory. Errors in one of these items could affect the price adjustment substantially. Report the results of the review in an explanatory note at the bottom of the General Mess Operating Statement (NAVSUP Form 45), or attach a memorandum listing the items causing the high adjustment including fixed and last receipt prices, if the review does not result in the price adjustment being reduced to less than 10 percent of the value of stores consumed.

POSTING UIC NUMBERS

Only the unit identification code numbers from documents originating at another activity are posted to the NAVSUP Form 367. The unit identification code numbers are not entered under "Receipts", instead, they are posted under "Expenditures", as shown in figure 9-5.

GENERAL MESS ACCOUNTING SYSTEMS

General mess operations for all ships afloat utilize end use accounting. Activities ashore may account for receipts and expenditures of items under the appropriation, Military Personnel, Navy, in lieu of the Navy Stock Account, upon approval of the Navy Fleet Material Support Office, when the following conditions exist:

- Food items are received and stocked primarily for consumption by the reporting activity.
- Slight or no subsistence support is rendered by the general mess.
- Navy Stock Account returns are not rendered on other Navy Stock Account material.
- General mess inventory does not exceed $10,000.

Under this authority the general mess must utilize the General Mess Operating Statement (NAVSUP Form 45) in lieu of the Financial Inventory Report (NAVCOMPT Form 2154) to account for receipts and expenditures. The original and one copy of the NAVSUP Form 45 is then submitted to the Navy Subsistence Office. (See fig. 9-6).

INVENTORIES REPORTED IN NAVY STOCK ACCOUNT

Upon approval of the Navy Fleet Material Support Office, activities that meet the first three conditions of the preceding paragraph, may render a NAVSUP form 45 when food items are received from a supporting Navy activity and arrangement is made with the supporting Navy activity to make the monthly credit and debit transfers. This is not end use accounting since the general mess inventory is not reported in the general mess return. The value of stocks held by the supported activity are transferred on a Requisition and Invoice/-Shipping Document (DD Form 1149) containing the following certification:

_____
(DATE)

"I certify that food items in the amount of $_____ are on hand for which I hold myself accountable. I will accept return invoicing of this money value on _____
(DATE)

_____
(FOOD SERVICE OFFICER)."

Under this authority the supporting activity issues food items to the supported activity as a charge to the appropriation, Military Personnel, Navy, and reports the value of stocks held by the supporting activity in its Navy Stock

NAVSUP FORM 367 (8-66)

RECORD OF RECEIPTS AND EXPENDITURES (4442)

RECEIPTS

*19 73 MO.	DAY	SOURCE	DOCUMENT NO			VALUE		
1	1	INV. B F				28	200	41
1	5	NSD GTMO	2362	9018		1	116	64
1	23	NSD GTMO	3009	9034		1	397	20
2	18	NAVSTA Rds Rds	3036	9A02	9P85	2	871	64
2	28	NAVSUPPACT CZ	3049	9032		1	789	49
3	16	NAVSUPPACT CZ	3068	9002	9476	2	316	35
3	21	NAVSTA Key West	3072	9020	9015	2	620	43
3	26	Foremost Dairies	3079	9034	9086		360	00
3	31	TOTAL				40	672	16

SERIAL NUMBERS REPRESENT THE FIRST AND LAST ITEMS REQUISITIONED ON RECEIPT DOCUMENT(S)

EXPENDITURES

*19 73 MO.	DAY	ACTIVITY/ PURPOSE	DOCUMENT NO			VALUE		
1	12	USS NOA	52141	3012	9018		43	20
1	31	W/R mess					474	66
2	10	Surf			9413		78	12
2	18	USS			9014		208	71
2	28	W/R					411	47
3	18	Surf			9086		57	20
3	19	USS AUIT	4258	3078	9017		25	20
3	31	W/R mess					328	08
3	31	Exp w/o survey		3090	9411		108	10
3	31	Issues To G.M				24	046	83
3	31	INV.				14	785	44
		SUBTOTAL				40	567	01
		Price Adj					105	15
		TOTAL				40	672	16

SERIAL NUMBER REPRESENTS THE FIRST ITEM LISTED ON NAVSUP FORM 154 (SURVEY REQUEST, REPORT & EXPENDITURE)

POST UIC OF OTHER ACTIVITIES

SERIAL NUMBER REPRESENTS THE ITEM CODE OF THE FIRST ITEM LISTED ON NAVSUP FORM 1334 (EXPENDITURE LOG)

- CLOSEOUT OF THE RECEIPTS SIDE: After all of the receipts for the quarter are posted to the NavSup Form 367, a line is drawn under the last entry, and the "Value" column is totaled.

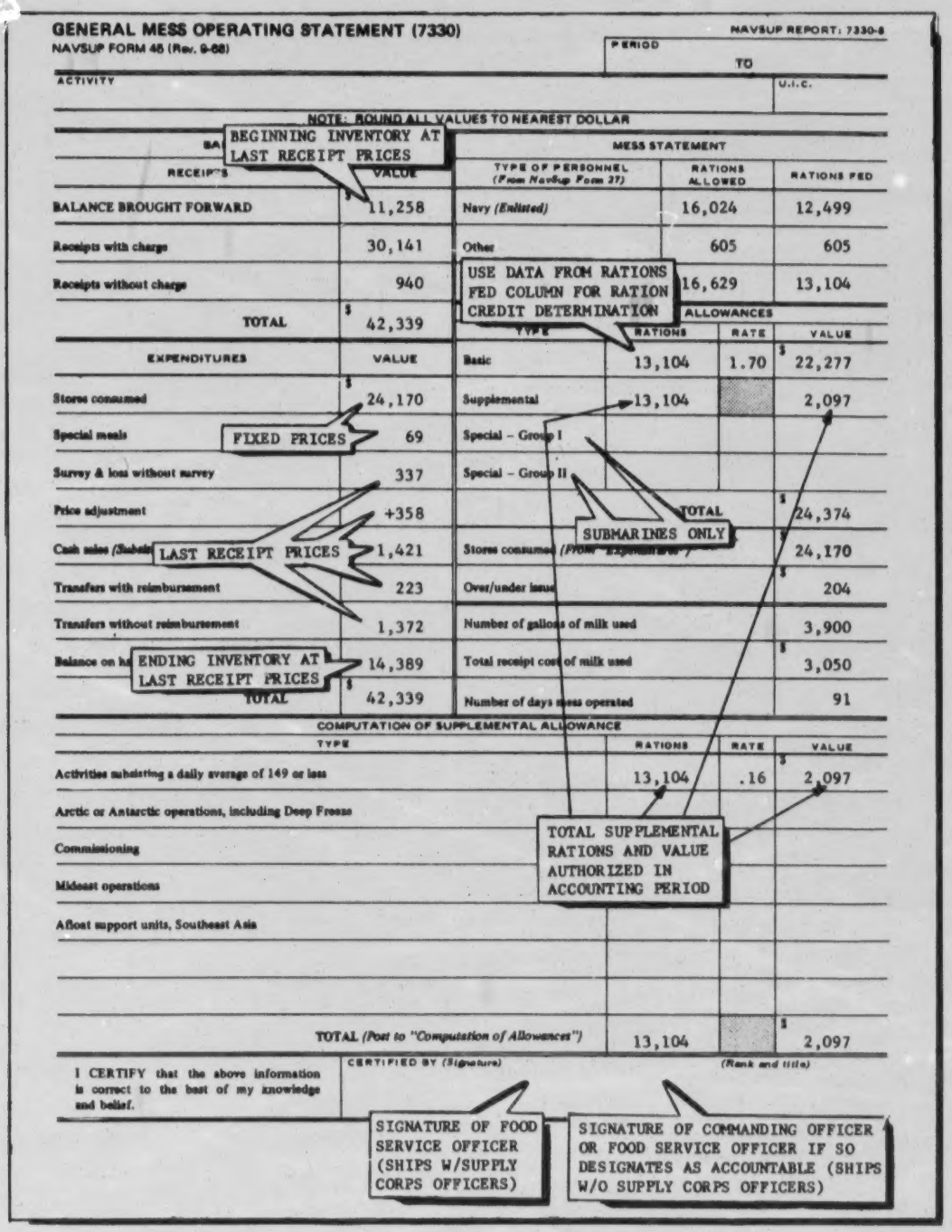
CLOSEOUT OF THE EXPENDITURES SIDE: The closeout procedure for the expenditures side of the NavSup Form 367 involves a few document postings and a little arithmetic:

1. Insure that the ordinary expenditure documents for the quarter are all posted to the NavSup Form 367.
2. Post the total value of the quarterly issues chargeable to the general mess. (Source document is the NavSup Form 1059-1C (Page 8) summarizing issues to the general mess).
3. Post the total value of the ending inventory.
4. Subtotal the value column.
5. The difference between the subtotal of the expenditures side and the total of the receipts side of NavSup Form 367 will be considered a price adjustment and will be posted to the "Value" column of the expenditures side. The price adjustment figure (plus or minus) will bring the two sides of the form into balance.
6. Draw a line under the price adjustment figure and total the "Value" column. The total of the expenditures side must equal the total of the receipts side.

*Calendar year

STOCK NO -0108-500-8801

Figure 9-5.—Posting unit identification code numbers to NAVSUP Form 367.



GENERAL MESS OPERATING STATEMENT (7330)
NAVSUP FORM 46 (Rev. 9-68)

NAVSUP REPORT: 7330-8

PERIOD TO

ACTIVITY U.I.C.

NOTE: ROUND ALL VALUES TO NEAREST DOLLAR

BEGINNING INVENTORY AT LAST RECEIPT PRICES

RECEIPTS	VALUE
BALANCE BROUGHT FORWARD	$ 11,258
Receipts with charge	30,141
Receipts without charge	940
TOTAL	$ 42,339

EXPENDITURES	VALUE
Stores consumed	$ 24,170
Special meals	69
Survey & loss without survey	337
Price adjustment	+358
Cash sales (Subsist	1,421
Transfers with reimbursement	223
Transfers without reimbursement	1,372
Balance on ha	14,389
TOTAL	$ 42,339

FIXED PRICES

LAST RECEIPT PRICES

ENDING INVENTORY AT LAST RECEIPT PRICES

MESS STATEMENT

TYPE OF PERSONNEL (From NavSup Form 27)	RATIONS ALLOWED	RATIONS FED
Navy (Enlisted)	16,024	12,499
Other	605	605
	16,629	13,104

USE DATA FROM RATIONS FED COLUMN FOR RATION CREDIT DETERMINATION

ALLOWANCES

TYPE	RATIONS	RATE	VALUE
Basic	13,104	1.70	$ 22,277
Supplemental	13,104		2,097
Special – Group I			
Special – Group II			
TOTAL			$ 24,374
Stores consumed (From Expenditures)			$ 24,170
Over/under issue			$ 204
Number of gallons of milk used			3,900
Total receipt cost of milk used			$ 3,050
Number of days mess operated			91

SUBMARINES ONLY

COMPUTATION OF SUPPLEMENTAL ALLOWANCE

TYPE	RATIONS	RATE	VALUE
Activities subsisting a daily average of 149 or less	13,104	.16	$ 2,097
Arctic or Antarctic operations, including Deep Freeze			
Commissioning			
Mideast operations			
Afloat support units, Southeast Asia			
TOTAL (Post to "Computation of Allowances")	13,104		$ 2,097

TOTAL SUPPLEMENTAL RATIONS AND VALUE AUTHORIZED IN ACCOUNTING PERIOD

I CERTIFY that the above information is correct to the best of my knowledge and belief.

CERTIFIED BY (Signature) (Rank and title)

SIGNATURE OF FOOD SERVICE OFFICER (SHIPS W/SUPPLY CORPS OFFICERS)

SIGNATURE OF COMMANDING OFFICER OR FOOD SERVICE OFFICER IF SO DESIGNATES AS ACCOUNTABLE (SHIPS W/O SUPPLY CORPS OFFICERS)

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Figure 9-6.—Preparation of NAVSUP Form 45, afloat.

Account returns. A certified true copy of the DD Form 1149 must support the Navy Stock Account stores returns. The supported activity documents expenditures, maintains records, and submits reports in the manner prescribed for activities utilizing end use accounting except that the values of general mess stocks on hand are not reported on the NAVSUP Form 45. (See fig. 9-7).

CUSTODY ASSIGNMENT OF NSA STOCKS TO FOOD SERVICE OFFICER

When Navy Stock Account stocks and general mess stocks cannot be physically segregated because of inadequate storage facilities, or when the food service officer is also the material division officer, authority is requested from FMSO to assign custody of NSA stocks to the food service officer. Authority normally is granted only to an activity carrying stocks of food items for consumption by its own general mess. If approval is obtained, entire stocks of food items are considered as general mess issue room stocks and are accounted for in accordance with paragraph 6095 (NAVSUP P-486).

SUBMISSION OF NAVSUP FORM 45

A General Mess Operating Statement (NAVSUP Form 45), original and one copy, with the substantiating documents is submitted by the food service officer as follows:

- Within 10 days following the end of each regular accounting period.
- Within 15 days following the end of an accounting period with "Overissue".
- When the return of one period is merged with that of a previous or subsequent period, but not later than 10 days following the latter merged period.

The NAVSUP Form 45 on subsistence returns for fleet ballistic missile submarines is rendered for the period the mess is administered by each crew (blue or gold), without regard to fiscal quarter or fiscal year. An alphabetic suffix B or G is added to the UIC to indicate blue or gold crew. For example, the SSBN 598 would render subsistence returns under UIC code 5106(B) and 5106(G).

RELIEF OF THE ACCOUNTABLE OFFICER

General mess returns are not submitted for fractional periods upon relief of the accountable officer except for merged returns. Upon relief, an inventory is taken by both the relieved and relieving officers, and records are balanced but not closed out. A copy of the relieving inventory is forwarded to the Navy Subsistence Office as soon as possible after completion. The accounts receivable of the relieved officer are transferred to the relieving officer. The relieving officer receipts for the monetary value of the inventory and submits returns at the end of the regular accounting period. If the relieving officer is not satisfied that accountability is within prescribed limits, the commanding officer may direct that the officer being relieved close records and submit a return for the period of his accountability.

DELAY AND DELINQUENCY

When your returns cannot be submitted on or before the required date, a letter from the commanding officer is forwarded to NSO explaining the reason for the delay and the anticipated mailing date. It must be forwarded in time to reach NSO before the normal submission date. Copies of the letter are also forwarded to the next higher echelon in the military chain of command.

MERGED RETURNS

Your general mess can merge returns for 30 days or less of an accounting period with the prior or following accounting period. The merged returns are approved in writing by the commanding officer of your ship or activity and NSO is notified as soon as possible that a merged return is to be submitted. Returns for the period ending 30 June are not merged with the returns

BEST COPY AVAILABLE

GENERAL MESS OPERATING STATEMENT (7330)
NAVSUP FORM 45 (Rev. 9-68)

NAVSUP REPORT: 7330-8

PERIOD ____ TO ____

ACTIVITY ____ U.I.C. ____

NOTE: ROUND ALL VALUES TO NEAREST DOLLAR

BALANCE SHEET

RECEIPTS	VALUE
BALANCE BROUGHT FORWARD	$
Receipts with charge	79,827
Receipts without charge	
TOTAL	$ 79,827

EXPENDITURES	VALUE
Stores consumed	$ 76,431
Special meals	1,100
Survey & loss without survey	221
Price adjustment	+935
Cash sales *(Subsistence items)*	1,140
Transfers with reimbursement	
Transfers without reimbursement	
Balance on hand	
TOTAL	$ 79,827

FIXED PRICES

LAST RECEIPT PRICES

MESS STATEMENT

TYPE OF PERSONNEL *(From NavSup Form 37)*	RATIONS ALLOWED	RATIONS FED
Navy *(Enlisted)*	55,460	51,091
Other	2,980	2,410
TOTAL	58,440	53,501

COMPUTATION OF ALLOWANCES

TYPE	RATIONS	RATE	VALUE
Basic	53,501	1.41	$ 75,423
Supplemental	18,930		1,325
Special - Group I			
Special - Group II			
TOTAL			$ 76,748
Stores consumed *(From "Expenditures")*			$ 76,431
[illegible]/under issue			$ 317
Number of gallons of milk used			11,275
Total receipt cost of milk used			$ 8,815
Number of days meals operated			90

COMPUTATION OF SUPPLEMENTAL ALLOWANCE

TYPE	RATIONS	RATE	VALUE
Activities subsisting a daily average of 149 or less			$
Arctic or Antarctic operations, including Deep Freeze			
Commissioning	18,930	.07	1,325
Mideast operations			
Afloat support units, Southeast Asia			
TOTAL *(Post to "Computation of Allowances")*	18,930		$ 1,325

TOTAL SUPPLEMENTAL RATIONS AND VALUE ALLOWED IN THE ACCOUNTING PERIOD

I CERTIFY that the above information is correct to the best of my knowledge and belief.

CERTIFIED BY *(Signature)* ____ *(Rank and title)* ____

SIGNATURE OF FOOD SERVICE OFFICER

STOCK NO. 0108-800-1203 D-19428

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Figure 9-7.—Preparation of NAVSUP Form 45, ashore.

for the period beginning 1 July. This is the only time that returns can not be merged.

FINAL RETURNS

If your ship is being deactivated or decommissioned, you no longer submit returns. The final NAVSUP Form 45 is annotated appropriately "Final returns" in red in the body of the "Balance sheet" section. The "Balance on hand" entry on the NAVSUP Form 45 is left blank. Stock balances transferred are included in entries opposite the captions "Transfers with reimbursement" or "Transfers without reimbursement", as appropriate, and substantiated by copies of the transfer document.

COMBINED RETURNS

When a combined NAVSUP Form 45 is rendered for a group of ships with 25 or less persons on board, but each operating a separate general mess, and for two or more messes ashore, a separate monetary ration allowance is taken for each mess. The value is computed individually for each mess on the reverse of the NAVSUP Form 45. The "Values" are totaled and posted to the "Total" block on the front of the NAVSUP Form 45. The "Computation of allowances" section is noticeably annotated "See reverse".

PREPARATION OF NAVSUP FORM 45

The General Mess Operating Statement (NAVSUP Form 45) is the principal reporting form and is submitted quarterly at the end of each accounting period. The form is prepared in an original and two copies, then certified by the FSO. The original and one copy is then sent to the Navy Subsistence Office, with the other copy being retained by the FSO. At the end of the fiscal year an additional copy of NAVSUP Form 45 is prepared and sent to Naval Supply Corps School. This is the only quarter for which this is done. The source documents for the Form 45 are the Subsistence Report (NAVSUP Form 1059-1A, 1B, and 1C), Ration Report (NAVSUP Form 27), Cash Sales of Meals (NAVSUP Form 1327), and any other substantiating documents necessary in the preparation of the NAVSUP Form 45. With the exception of rates used for computation of allowances, all monetary values are rounded to the nearest dollar. When you prepare the NAVSUP Form 45 make sure that your activity and unit identification code numbers are on all the ncessary documents before sending them to NSO.

BALANCE SHEET SECTION

On the receipts side of the NAVSUP Form 45, the beginning inventory at last receipt prices and receipts with and without charge are posted. These are then totaled and must agree with the final "Total" on the "Receipts" side of the NAVSUP Form 367.

BALANCE BROUGHT FORWARD

The balance brought forward is the total money value of the inventory at the beginning of the accounting period. It must agree with the "Balance on hand" caption on the NAVSUP Form 45 submitted for the previous period and the opening inventory on the "Receipts" side of the NAVSUP Form 367 rounded to the nearest whole dollar. Activities holding bulk stocks in the Navy Stock Account are not to use this caption. The caption "Balance brought forward" is not to be utilized to report the value of food items transferred between crews (blue and gold) of fleet ballistic missile submarines. The balance on hand at the beginning of each patrol period of FBM submarines is included on the NAVSUP Form 45 as a receipt opposite the caption "Receipts without charge." This is supported by a Requisition and Invoice/Shipping Document (DD Form 1149) indicating the money value only.

Receipts With Charge

Reported opposite the caption "Receipts with charge" is the total value of receipts from purchase (vendors and other government agencies)

and the Navy Stock Account functional accounts 51000 (from stock points and store ships (AFs, AFS's and AOE's which will be in agreement with the total of the three monthly Ration Reports (NAVSUP Form 27).

Receipts Without Charge

Reported opposite the caption "Receipts without charge" is the total value of receipts from the appropriation, Military Personnel, Navy, 73000 series of functional accounts (from ships other than store ships), submarine receipts from AS's, and SSBN's inventories transferred between blue and gold crews.

Total

The sum of the "Balance brought forward", "Receipts with charge", and "Receipts without charge" captions is reported opposite the caption "Total." It must agree with the final total of the "Receipts" section on the NAVSUP Form 367 as modified by rounding each caption entry to the nearest whole dollar.

EXPENDITURES

In the expenditures section of the NAVSUP Form 45 are posted the stores consumed, special meals, surveys and loss without survey, price adjustments, cash sales of subsistence, transfers with and wihtout reimbursement, and balance on hand. These are also totaled and must agree with the final total of the "Receipts" and "Expenditures" sections of the NAVSUP Form 367 and with the "Total" caption in the "Receipts" section of the "Balance sheet".

Stores Consumed

The total value, at fixed prices, of food items consumed in the general mess is reported opposite the caption "Stores consumed". The entry is posted from the summary of issues to the general mess at the end of the accounting period. It must agree with issues to the "General Mess" entry on the NAVSUP Form 367 rounded to the nearest whole dollar and does not include the value of galley produced bakery products sold.

Special Meals

The value at fixed prices (or last receipt price when there is no fixed price) of food items used in flight and boat meals is reported opposite the caption "Special meals". It must agree with entries in the "Expenditures" section of the NAVSUP Form 367 rounded to the nearest whole dollar.

Surveys and Losses Without Survey

The total losses at last receipt prices are reported opposite the caption "Survey and loss without survey". They are posted from the "Expenditures" section of the NAVSUP Form 367 and rounded to the nearest whole dollar.

Price Adjustments

The value (plus or minus) required to make the total expenditure equal to the receipts is reported opposite the caption "Price adjustment." This value may not agree with the price adjustment caption on the NAVSUP Form 367 due to rounding to the nearest whole dollar.

Cash Sales of Food Items

The value, at last receipt prices, of raw food items (not meals) sold from the general mess is reported opposite the caption "Cash sales (subsistence items)." Items turned in to store and sold by supply officers from the Navy Stock Account stocks are not included.

Transfers With Reimbursement

The value, at last receipt prices, of items turned in to store (stock points, store ships, and

supply officers having Navy Stock Account stocks) as transfers from the appropriation, Military Personnel, Navy, 73000 series of functional accounts, to Navy Stock Account, 51000 series of functional accounts is reported opposite the caption "Transfers with reimbursement".

Transfers Without Reimbursement

The value, at last receipt prices, of transfers between general messes and ships other than store ships (transfers within the appropriation, Military Personnel, Navy, 73000 series of functional accounts), transfers of inventories between blue and gold crews of SSBNs, and the value of packaged operational rations (combat meals) is reported opposite the caption "Transfers without reimbursement".

Balance on Hand

The total value, at last receipt prices, of the ending inventory is reported opposite the caption "Balance on hand" (Navy Stock Account activities are not to use this caption). This value must agree with the "inventory" entry on the "Expenditures" section of NAVSUP Form 367 rounded to the nearest whole dollar.

Total

The total of all the "Expenditures" captions is reported opposite the caption "Total". It must agree with the final totals of the "Receipts" and "Expenditures" sections of NAVSUP Form 367 and with the "Total" caption in the "Receipts" section of the "Balance sheet" as modified by rounding each caption entry to the nearest whole dollar.

MESS STATEMENT

The "Mess Statement" section of the NAVSUP Form 45 is a summary of the monthly Ration Report, NAVSUP form 27 (see Ch. 4 for sample). Computing rations is accomplished by entering the total rations allowed and fed to Navy (enlisted) and for all types of personnel other than "Navy regular" prepared for the accounting period.

Navy (enlisted)

The net total rations allowed for "Navy regular" (the first line on the three monthly NAVSUP Forms 27) is reported opposite the caption "Navy (enlisted)" on NAVSUP Form 45. All activities must report both rations allowed and rations fed. See figure 9-6.

Other and Total

The net total rations allowed for all types of personnel other than "Navy regular" (all entries on the three monthly NAVSUP Forms 27 except the first line) is reported opposite the caption "Other". This includes cash sales of meals. All activities must report both rations allowed and rations fed. The total of captions "Navy (enlisted)" and "Other" are then totaled and reported opposite the caption "Total".

COMPUTATION OF ALLOWANCES

Reported opposite the caption "Basic" are the total rations fed from the "Mess statement" section, the rate (latest basic monetary rate promulgated by the Navy Subsistence Office), and the value of the product of rations times the rate. All activities must use rations fed in this computation.

Opposite the caption "Supplemental" the total rations and monetary value are computed in the "Computation of supplemental allowances (par. 8063-3C of NAVSUP P-486). Total supplemental rations and values allowed can be seen in figure 9-7.

The special allowances (applicable to submarines only) are reported opposite the captions "Special group I" and "Special group II". Submarines must compute basic and special allowances. Note that a submarine may earn an allowance in both special groups (see figure 9-6) during an accounting period if deployed 30 or more consecutive days and if in ports in the

United States excluding Alaska and Hawaii for part of the period. The "Special group I and II" captions are not to be utilized by ashore activities.

The total monetary value of captions "Basic," "Supplemental," and "Special group I, and group II" in the "Computation of allowances" section is reported opposite the caption "Total". Activities rendering a combined NAVSUP Form 45 for two or more messes must compute the "Value" individually for each mess on the reverse side of NAVSUP Form 45. The values are totaled and reported opposite the caption "Total" on the front of NAVSUP Form 45 and the "Computation of allowances" section is conspicuously annotated "See reverse".

Stores Consumed

The monetary value of the "Stores consumed" caption in the "Expenditures" section of the "Balance sheet" is posted opposite the caption "Stores consumed".

Over/Under Issues

The difference between the "Stores consumed" and the "Total" in the "Computation of allowances" section is reported opposite the caption "Over/under issue". "Over" or "Under" is marked out as appropriate. When the "Total" of the "Computation of allowances" is greater than "Stores consumed" an underissue exists. The under issue value is not carried forward to succeeding accounting periods under any circumstances. If the "Stores consumed" is greater than the "Total" in the "Computation of allowances" section an overissue exists and steps should be taken to correct the overissue.

When a net overissue occurs at the end of the accounting period, the food service officer must determine the cause of the overissue and take immediate corrective action to eliminate the cause. A letter reporting the cause and corrective action initiated is prepared within 15 days following the close of the accounting period, and is then forwarded with the return rendered to the Navy Subsistence Office, via the military chain of command. A copy of the letter report and NAVSUP Form 45 are forwarded direct to N.S.O. Commanding officers are encouraged to request assistance through the military chain of command (or their area food management team) to ensure good mess management practices. Overissues are not be be carried forward to succeeding accounting periods.

Number of Gallons of Milk Used

The quantity (even if received from a stock point) of fresh milk consumed in your general mess is reported on the NAVSUP Form 45. Fresh milk includes the following items:

- Chocolate milk, pasteurized, fresh, 3.25% minimum butterfat,
- Milk, white, recombined, pasteurized,
- Milk, white, whole, fresh, pasteurized.

(Buttermilk, canned, and dry milk are not included.)

Total Receipt Cost of Milk Used

The total cost (at receipt price in effect at time of issue) of fresh milk issued to the general mess taken from the Subsistence Ledger (NAVSUP Form 335) is reported opposite the caption "Total receipt cost of milk used." Fixed prices for this computation are not to be used.

The number of days the general mess operated during the accounting period is reported opposite the caption "Number of days mess operated".

SUBSTANTIATION OF SUBSISTENCE RETURNS

The original and one copy of the General Mess Operating Statement (NAVSUP Form 45), with the substantiating documents are submitted to the Commanding Officer, Navy Subsistence Office, Washington, D.C. 20374, within 10 days following the end of each accounting period

including merged periods. A set of returns is not submitted to the Navy Finance Center, Cleveland.

SUBSTANTIATING DOCUMENTS

The original and one copy of the NAVSUP Form 45 is supported by the substantiating documents listed in Fig. 9-8. All of the supporting documents must be legible. Any word or figure lacking complete legibility is carefully inked in. Only the captions listed require submission of substantiating documents with the NAVSUP Form 45.

DOCUMENTS RECEIVED AFTER RETURNS ARE SUBMITTED

Documents that are received after submission of the returns to which they relate and that do not require any adjustment are forwarded with a letter of transmittal indicating the applicable accounting period and the name and unit identification code of the activity concerned.

Adjustment of Receipts Reported on Previous 45

If a corrected or adjusted receipt invoice is received after a return has been submitted, the difference between the amount previously reported and the corrected amount indicated on the adjusted invoice is included opposite the applicable receipt caption on the current NAVSUP Form 45. A copy of the corrected invoice is submitted with the report in which the adjustment is made.

Exception to these procedures is made only when it has been determined that inclusion of the adjustment in the current return would work to the disadvantage of the general mess; i.e., if the adjustment would cause an overissue in the current return. When an overissue would occur, a corrected return is submitted for the period in which the erroneous receipt was previously reported.

COPY OF RETURNS FOR NSCS

Officer students at the Naval Supply Corps School, Athens, Ga., receive their orders to duty in the fleet two weeks before graduation. During the last two weeks of the course, study is concentrated on the specific assignment to which they have been ordered. To provide up-to-date information with which to conduct this training, commands with Supply Corps officer personnel are required to forward via airmail to NSCS Athens, Ga., a copy of the NAVSUP Form 45, for the accounting period ending 30 June. This is the only time a copy of the returns is sent to the school during the fiscal year.

RETENTION OF RECORDS AND DOCUMENTS

The food service officer maintains files of accounting records and substantiating documents required for audit of food items, supply, and general mess operations. Records and documents will be retained and disposed of in accordance with Disposal of Navy and Marine Corps Records. Following is a list of original and copies of records and documents to be retained by the food service officer.

ORIGINALS RETAINED

- Subsistence Ledger (NAVSUP Form 335),
- Record of Receipts and Expenditures (NAVSUP Form 367),
- General Mess Control Record (NAVSUP Form 338),
- Subsistence Report (NAVSUP Form 1059-1A, 1B, 1C) (inventory),
- NAVSUP Forms 1059A, B, and C and Subsistence-Item Request/Issue Document (NAVSUP Form 1282),
- Special-Meal Request/Receipt (NAVSUP Form 340),
- Monthly Recapitulation of Meal Record (NAVSUP Form 1292), and
- Report of Subsistence Sales (NAVSUP Form 1327).

NAVSUP Form 45 caption	Substantiating document
Balance sheet receipts	
Receipts with charge (Navy Stock Account activities only)	Summary of Material Receipts/ Expenditures (NAVCOMPT Form 176) (original)
(Ships and end use activities)	Each purchase document for receipts from vendors and other government agencies (one copy) (Documents for receipts from Navy supply points and stores ships are not required)
Expenditures (all activities)	
Stores consumed	Summary of issues to the general mess (original)
Survey and loss without survey	Survey Request, Report and Expenditure (NAVSUP Form 154) (original) Expenditure Log (Loss without Survey) (NAVSUP Form 1334) for losses of food items expended without survey) (original)
Transfers with reimbursement	Copy of Requisition and Invoice/ Shipping Document (DD Form 1149) for each transfer action involving reimbursement
Transfers without reimbursement	Summary of transfers listing each activity by name and unit identification code, the value of each transfer and the total value of all transfers without reimbursement (original) (may be reported on a NAVCOMPT Form 176)
Balance on hand	Inventory--Subsistence Report (NAVSUP Form 1059-1A, 1B, and 1C) (copy) submitted only upon relief of the food service officer (commanding officer of ships without Supply Corps officers) and when an overissue occurs

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Figure 9-8.—Form 45 and substantiating documents.

COPIES RETAINED

- General Mess Operating Statement (NAVSUP Form 45),
- Subsistence Report (NAVSUP Form 1059-1A, 1B, 1C) (recapitulation of issues to the general mess),
- each receipt document for the accounting period stapled, with an adding machine tape confirming the total,
- each expenditure document for the accounting period for which an original is not retained, all expenditure documents are stapled with an adding machine tape confirming the total,
- monthly Ration Report (NAVSUP Form 27),
- Special Meals Report (NAVSUP Form 1340), and
- Expenditure Log (Loss without Survey) (NAVSUP Form 1334).

CHAPTER 10
LANDING PARTY OPERATIONS

There are times when you may go ashore as a member of a landing party attached to a ship. In this case, you will probably either be subsisted off the ship or be provided with operational type rations for the period ashore. However, you should be prepared to provide food for the assault troops ashore since you may be assigned to an amphibious or a Naval mobile construction battalion. A landing party consisting of one hundred men, usually has two or three Commissarymen assigned.

A minimum of 3 days' supply of combat rations, normally consisting of individual combat meals (C Rations) are carried by each detachment of a battalion. The basis for issue is one ration per man per day. After the initial stage of the assault, the battalion may set up field kitchens to feed its own personnel. The standard "B" ration is planned for subsisting the shore party during operations that permit organized messing facilities, but allow for semiperishable supplies only. At such times as this ration is used in operations where perishable supplies are available, every effort should be made to substitute perishable supplies at the earliest possible time.

Some questions you will be able to answer after reading this chapter are:

- What are the major factors in selecting a kitchen layout?
- What type of terrain is best suited for constructing a root cellar?
- The soakage pit should be located how far from the kitchen area?
- What is the purpose of the oil cup on a swinging food box?

FIELD KITCHEN LAYOUT

The general area in which the mess will be located will normally be determined by the shore party commander. But it may be necessary for you as the senior Commissaryman to recommend that a particular site be selected.

There are a number of things to look for when you pick a site. If there is danger of bombing or other enemy action, select a place with good natural cover, well shielded from observation. High, dry ground, near a slope that provides good drainage, is desirable. A good water supply should be nearby, with an access road for kitchen traffic only, if possible. Above all, insist that your galley be located as far as possible from the heads. A layout for a rear area mess is shown in figure 10-1.

WATER SUPPLY

All water in the field should be regarded as contaminated until it is proved to be potable by bacteriological analysis. It may be contaminated during distribution and storage. All untreated water is considered unsafe until approved by a medical officer or his designated representative. During the initial phase of amphibious operations, each unit may carry its own water or depend on local supplies disinfected in lyster bags or canteens. The responsibility for the adequacy and safety of the water under these conditions also falls largely on the unit medical officer. However, you must be familiar with Chapter 5, Water Supply Ashore, of the *Manual of Naval Preventive Medicine*, NAVMED P-5010, which discusses the subjects of water supplies, sources, analysis, standards and purification in detail, and also the *Landing Party Manual*, OPNAV P34-3,

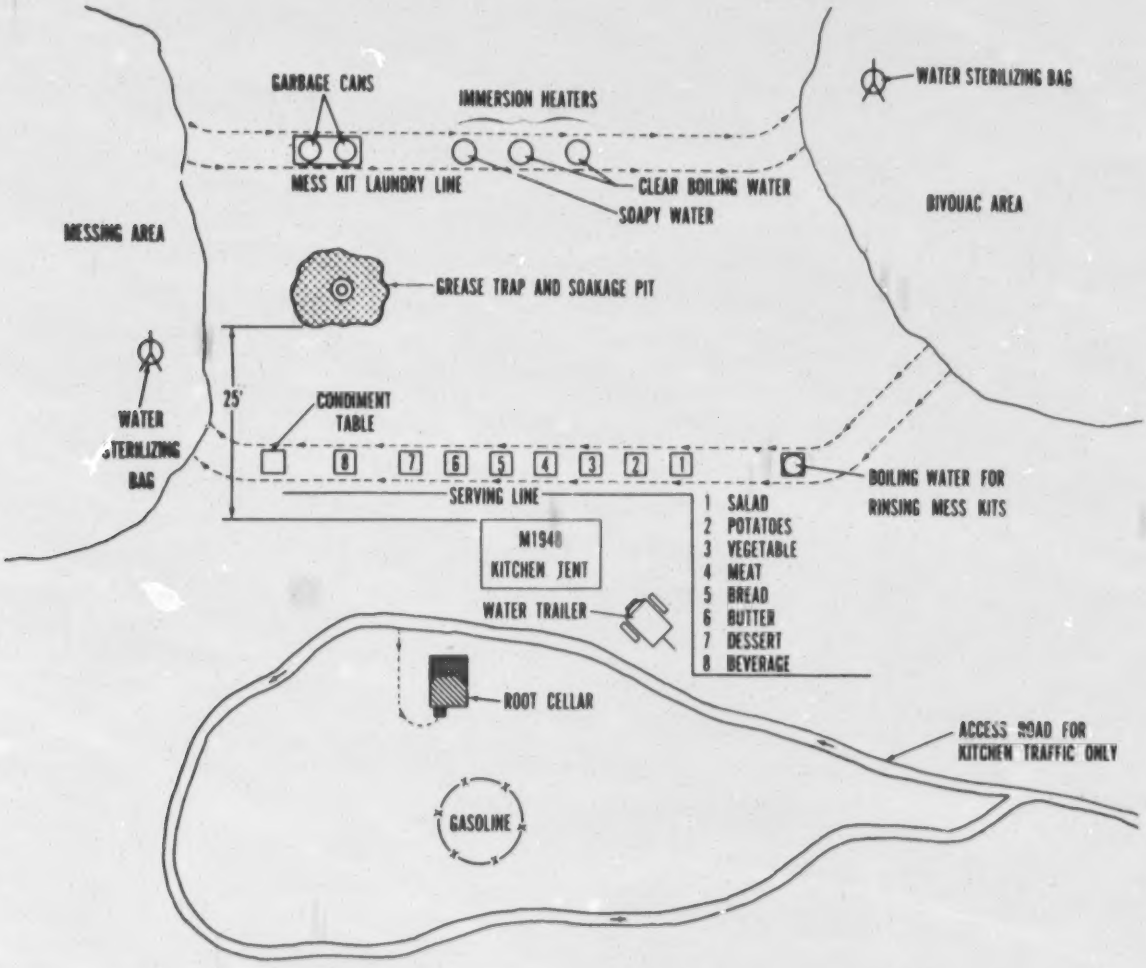

Figure 10-1.–Rear area mess layout.

in case medical personnel are not available. Remember that none of the methods of disinfecting water contained in these publications destroy radioactive substances or chemical poisons.

Quality of Ground Water

Ground Water–that is, water from springs or wells–is usually better than SURFACE WATER from rivers, streams, lakes, and ponds. When it is necessary to use water from a surface source, take it from a point well above and away from sewer outlets. Avoid places where refuse drains into a river, stream, or lake, and oily shore areas where wastes and drainage may make the water unpalatable or unfit for use. Always choose the clearest water possible; the clearer the water, the easier it is to disinfect and the better it appears. Clearness, however, is no guarantee of safety. All surface water must be treated.

When you use water from a ground source, such as wells or springs, be sure that it is located at a safe distance of 100 feet or more from sources of contamination such as latrines, septic

tanks, cesspools, and sewers. In limestone ground formation, the distance may need to be much greater. Wells and springs should be constructed to exclude surface water and high ground water infiltration. Well and spring sites should not be subject to flooding.

Water receptacles should be cleaned daily with boiling water or rinsed with a solution of potassium permanganate (one-third of a teaspoonful of potassium permanganate to 1 gallon of water). A solution of chlorinated lime is also very good for this purpose in the proportion of 1 part lime to 1000 parts water. These solutions are harmless and more certain in their action than the use of boiling water alone. Canteens when not in use should be emptied, dried, and cleansed with one of the above solutions. New cans and carts in which water is to be transported should be thoroughly steamed to remove coating then superchlorinated and rinsed before being filled with water for drinking purposes. See *Landing Party Manual*, OPNAV P34-3, for methods of superchlorination.

FOOD STORAGE

If you do not have mechanical refrigeration and the mess is to stay in one place for several days or more, you must provide storage facilities.

In temporary camps, you may place food in watertight containers and put these in springs or streams. For a short time, it is also possible to keep food items in the ground. This takes advantage of the insulating and cooling qualities of the moist earth beneath the ground surface and protects stored food from the elements. Dig a hole; line it with burlap sacks and boards; then bury the food in the hole; and cover it with soil, straw, or leaves.

For small amounts of food, a food box, such as the one shown in figure 10-2, which is screened with wire or cloth netting and suspended from the branch of a tree, can be effective. The oil cup keeps insects from crawling down the wires to the box.

If the terrain is hilly and a location can be found that slopes upward at a sharp angle, you can construct a ROOT CELLAR. (See fig. 10-3.) The root cellar has one of the advantages of a mechanical walk-in refrigerator. It makes foods easier to handle, especially when the foods are in bulk, because the height of the root cellar permits personnel to carry foods in or out of the cellar without stooping or bending.

The size of the excavation will vary according to the storage space required. Once the excavation is complete, the sides must be reinforced and lined with waterproof material. The floor should be leveled and covered with dunnage and the entrance graded away. Heavy boards or logs may be used to form the roof, and then covered with a tarpaulin. Top ventilation must be provided by openings at the tops of the cellar sides. The entrance should be fitted with a door which is large enough to permit easy passage for men carrying food in the largest anticipated bulk. Keep the door closed and covered with a canvas flap when it is not in use. Fill the spaces between exposed logs or boards with wet earth.

When the terrain is flat or when you need more space, you can construct an underground food box. The simplest kind consists of a packing box and a hole dug to fit it. After the box has been lowered into the hole, shovel loose earth into the spaces between the outside walls and the sides of the hole, and tamp it into a tight fit. Fashion the top of the box into a door,

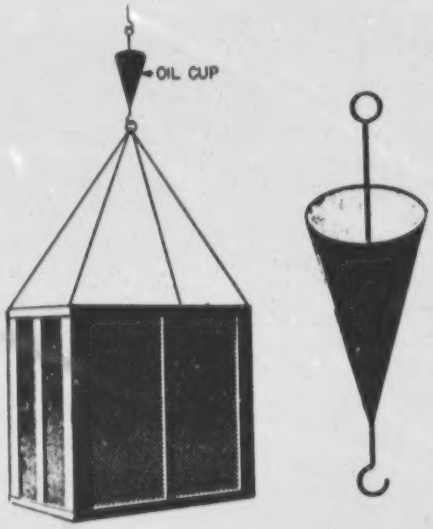

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Figure 10-2.—Swinging food box.

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90.18

Figure 10-3.–Root cellar.

and line the underside of the top with canvas or some similar material to help make it airtight. (See fig. 10-4.)

To make a double-walled type of food box, use one large packing box and one that is slightly smaller. Drill holes in the bottom of the larger box and cover its outer walls with waterproof paper or some similar material. Convert the top into a door with hinges.

Then dig the pit slightly larger than the box and fill the bottom with about 4 inches of stones or gravel. Next, sink the box into the pit so that the top is several inches below ground level.

Place the smaller box inside of the larger one, allowing for a space of from 3 to 4 inches between the sides of the two boxes all the way around. Stuff sawdust, straw, or grass between the two boxes to serve as insulation. For best results, keep this material damp at all times. Camouflage the box, when necessary, by placing a wet blanket over it and covering the blanket with leaves.

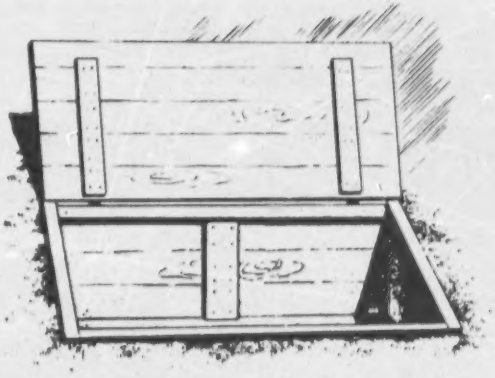

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Figure 10-4.–Underground food box.

The natural refrigeration provided by both the root cellar and the food box can be supplemented by the thawing of frozen meats within the storage space. Frozen meats will help refrigerate other perishables during the 24-hour

period required for them to thaw. If ice is available, you can partition off one end of the food box to form an ice compartment.

COOKING EQUIPMENT

Normally, you will have either a gasoline field range outfit or a small detachment cooking outfit, plus immersion type heaters for cans and tank trailers. These will make it possible for you to cook and maintain sanitary standards almost as well as you would in the galley aboard ship.

If you use emergency cooking facilities or equipment, remember that galvanized containers such as pails and garbage cans should not be used either for storage of liquids or for cooking any foods and beverages, particularly acid foods. Such containers are coated with zinc, which dissolves on contact with food acids. Poisoning from this source can result in serious, sometimes fatal illness. These containers may be used for storage of foods, such as flour, sugar, beans, and other bulky dry items.

FIELD RANGES

Gasoline field range outfits are the most satisfactory appliances available for preparing meals in the field. Models M1937 and M59 are currently being used by the Armed Forces. The Army technical manual, *Range Outfit Field, Gasoline, with Accessory Outfit*, TM 10-701, outlines the operation, maintenance, and repair of the M1937 field range. Model M59 operation, maintenance, and repair is covered in TM10-7360-204-12. One field range is adequate for 50 men or less. With two ranges, you can cook for 50 to 100 men and with three, as shown in figure 10-5, for as many as 225. (See fig. 10-5.) With four field ranges, you can cook for 226 to 300 men.

The gasoline field range outfit is designed to provide a complete outfit adaptable to the different requirements of field operations. The outfit consists of a cabinet with a burner unit, accessory outfit and necessary cooking utensils. The outfit is portable and can be operated while in transit.

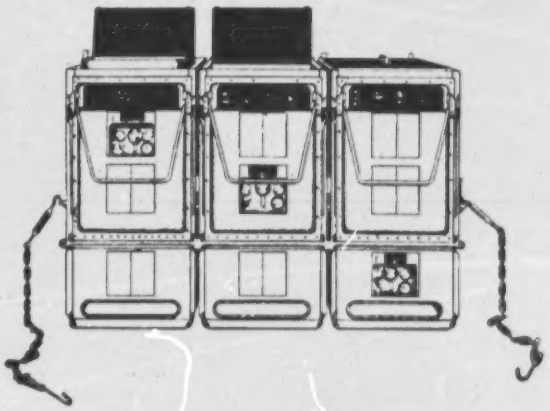

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Figure 10-5.—Three units of the M1937 range.

The range can be used for boiling, roasting, frying, and griddle cooking. Besides, it can be adapted to work as a bake oven. Some baking can be done in the covered roasting pan or in the cake pan placed inside the covered roasting pan. Pies bake well in the roasting pan alone, but for all other baked foods use the cake pan. If you do a great deal of baking with the range make the necessary adaptations. For complete information on safety precautions, operating and maintenance instructions, basic issue items list and maintenance allocation charts, et cetera, refer to the applicable Department of the Army technical manual. Be sure that you obtain a copy of the manual with the range and that the range model and TM model correspond.

The following sections discuss the operation of the burner units used on Models M1937 and M59 field ranges.

Lighting Fire Unit M1937

Preheat Period.—When you are lighting the fire unit proceed as follows:

1. Remove fire unit from cabinet and take it away from the range.
2. See that the fuel tank is full.
3. Close all valves and open air shutter.
4. Tilt the fire unit forward to allow any fuel to run out of the mixing chamber.

5. Pump air pressure to 50 pounds, in warm weather; 60 pounds in cold weather (below 32° F).

6. Close air shutter completely (move to the left), then reopen 1/16 inch.

7. Pull out burner control rod to line burner arms under generator.

8. Open flame valve (flame knob) six half-turns.

9. Hold lighted match over most convenient burner arm and open mixture (air) valve three half-turns.

10. Adjust the flame to the height of the generator, adjust the flame valve (flame knob).

11. Adjust air shutter to keep green flame (open shutter when yellow, close if the flame is blue).

12. After generator is hot (approximately 3 minutes) remove shield.

Conversion Period.–Open the fuel valve (fuel knob) one-fourth to one-half turn. At the same time, gradually close mixture valve (air knob). If the flame turns yellow, open the air shutter. Then push burner control rod into place. Keep air pressure between 30 and 50 pounds. To reduce pressure, open mixture valve one-fourth turn. Adjust height of flame for required heat by opening or closing the flame valve and adjusting the air shutter to keep the flame green. (Open shutter if yellow, close when blue.) See figure 10-6.

Turning off the Fire Unit.–Extinguish the flame by closing the fuel valve. The fire unit will go out as soon as the fuel in the generator has been consumed. Do not close the flame valve until the unit has cooled.

Safety Precautions.–Observe the following safety precautions: (1) Do not refuel a hot unit, and (2) Do not open filler cap while unit is hot or near an open flame.

Lighting Burner Unit M2

Preheat Period.–The procedure listed below must be followed when you are lighting the M2 burner unit which is installed in the Model M59 field range.

1. Remove burner unit from cabinet and take it to an outside area.

2. Close the preheater and generator valves.

3. Stand unit in a vertical position and loosen fuel filter cap by turning counterclockwise, slowly releasing air pressure.

4. Fill tank until fuel can be seen at the base of filler tube. (Caution: Do not overfill.)

5. Install and tighten fuel filler cap.

6. Remove air valve cap. Place unit in a horizontal position and attach hand pump to air valve.

7. Pump until gage reads 10 to 20 pounds.

8. Rotate orifice cleaner control several times to clean preheater orifice, the handle pointing down when you are finished.

9. Place a lighted match near preheater hand and open preheater valve knob one-fourth turn.

10. Allow preheater to burn for 30 seconds after ignition or until flame burns evenly; then turn preheater valve knob fully counterclockwise.

11. Allow preheater to burn until full length of generator is hot to the touch.

12. Set air shutter in a half open position.

Conversion Period.–Turn generator valve knob slowly counterclockwise to full open position. Burner should ignite before valve is fully open. Adjust air shutter lever until burner flame color is sea green. Turn preheater valve knob fully clockwise. The normal operating pressure is 10 to 20 pounds. Do not operate in excess of 30 pounds. See figure 10-7.

Turning Off Burner Unit.–Extinguish the flame on the main burner by closing the generator valve (clockwise) all the way.

Safety Precaution.–Observe the following safety rules:

1. Do not refuel a hot unit.

2. Do not remove air pressure while the unit is burning or hot.

3. Do not open filler cap while in vicinity of open flames.

4. Keep a check on pressure gage.

5. Do not operate beyond 30 pounds pressure.

6. Do not tighten fittings while in operation.

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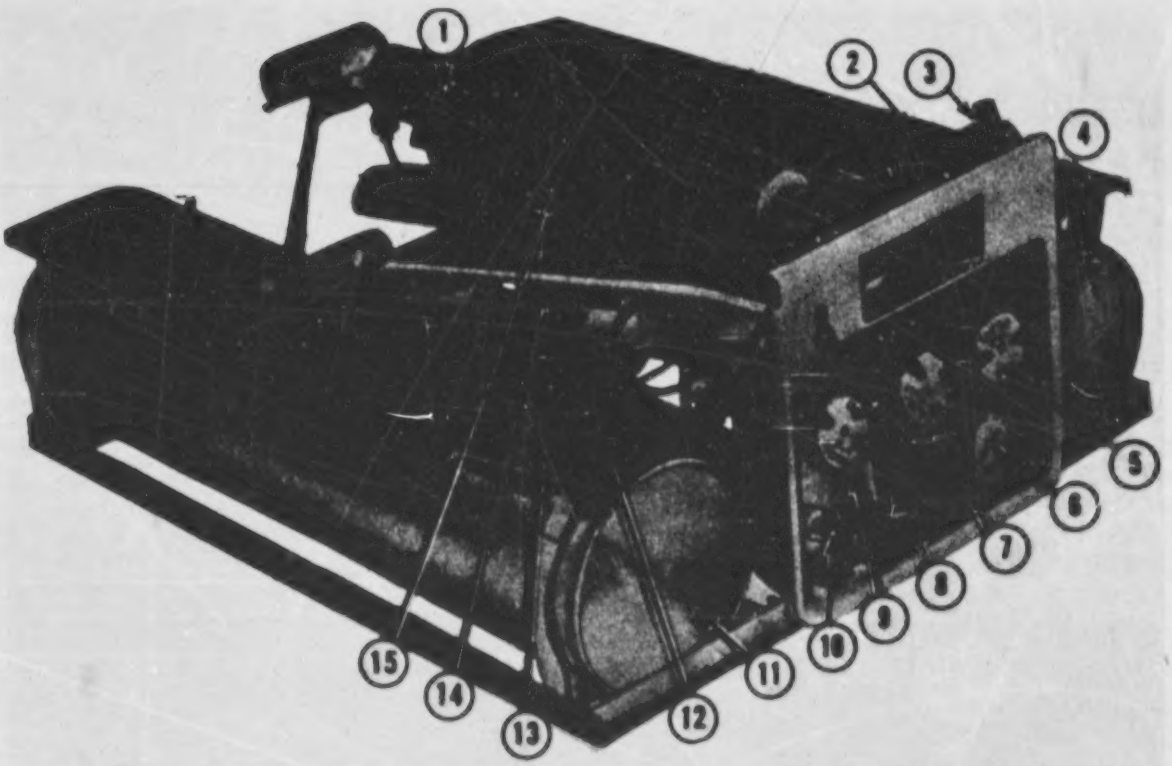

1 Generator
2 Fuel output valve assembly
3 Fuel tank filler tube cap
4 Fuel tank
5 Fuel valve assembly
6 Air pressure gage
7 Flame valve assembly
8 Air shutter
9 Mixture valve assembly
10 Air input valve assembly
11 Air tank
12 Air output elbow
13 Mixing chamber
14 Burner control rod
15 Burner head

48.62

Figure 10-6.—Fire unit, front three-quarter view M1937.

SMALL DETACHMENT COOKING OUTFIT

The small detachment cooking outfit consists of a stove and the necessary attachments and utensils required to prepare rations for 15 to 40 men. The outfit is designed primarily for out-of-door use by isolated detachments. If it is used indoors, a smokestack provided with the outfit must lead outside to avoid carbon monoxide poisoning. The outfit is divided into two sections, weighing approximately 40 pounds each, and may be easily carried on two packboards. A 5-gallon gasoline can, which completes the necessary equipment, may be carried on a third packboard.

The Army manual, *Outfit, Cooking, Small Detachment*, TM-10-7360-203-15, contains information on the operation and maintenance of the outfit as well as a description of major components. Tools, spare parts, and supplies for use with the small detachment cooking outfit should be requisitioned by stock number and standard nomenclature.

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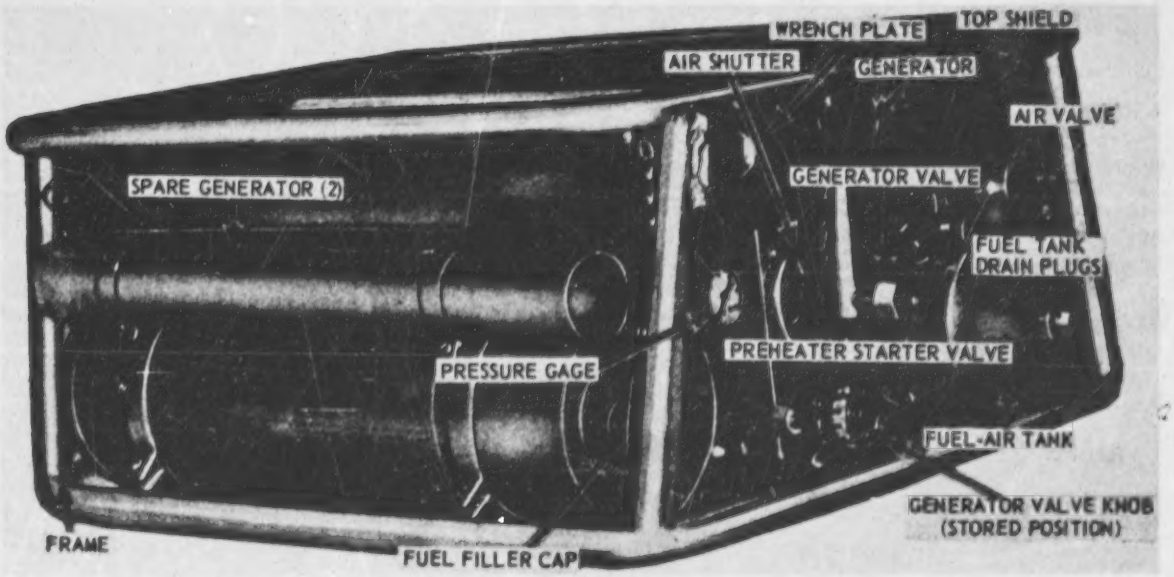

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Figure 10-7.—M2 Burner unit, left front three-quarter view.

IMMERSION HEATERS

The Army technical manual, *Heaters, Immersion Type, for Cans and Tank Trailers*, TM 10-4540-201-18, contains the minimum information necessary for the successful operation of the immersion type heater for corrugated cans and tank trailers. It presents general information such as description and data, operating and maintenance instructions, safety precautions, shipment, limited storage and demolition, maintenance allocation chart, and basic issue items list. Be sure you obtain a copy of this technical manual with the immersion heater.

The instructions contained in part 1 of the manual refer only to the corrugated can heater and covers two models, the new standard model and the old standard model.

The immersion type heater for corrugated cans is used primarily to heat water for mess operations in the field. It is designed to heat water in either 24- or 32-gallon corrugated cans. In cold climates, the heater can be used for melting snow or ice into water and also to keep existing water supplies from freezing. In extreme emergencies, the heater may be employed on a survival basis to heat a tent or other shelter, provided the exhaust fumes are piped out of the enclosed space.

Gasoline is the prescribed fuel. Although kerosene, diesel oils, and fuel oils may be burned in the heater, they produce more smoke and make a longer preheating period necessary to light the burner. A full tank of gasoline (2.2 gallons) should run the heater 6 hours under normal operating conditions. However, if the unit is allowed to run continuously at a high fire rate, a tank of gasoline may be consumed in less than 4 hours.

Part 2 of the training manual contains the minimum information necessary for the successful operation of the tank trailer immersion water heater. It presents general information, such as description and tabulated data, as well as operating and maintenance instructions. The instructions cover the two models designated new standard model and old standard model.

The tank trailer water heater is designed for use in cold climates to keep water supplies from freezing. It can be used to heat water in 250- and 400-gallon water tank trailers and in a 700-gallon water tank truck. In extreme emergency, it can be employed on a survival basis to heat a tent or other personnel shelter, provided

the exhaust fumes are piped out of the enclosed space. Fuel requirements and capabilities of the heater are identical to those of the corrugated can heater.

IMPROVISED STOVES

Any large metal container such as a wash tub, can easily be made into a stove. It is only necessary to provide an opening for tending to the fire and the bottom draft and to make a chimney at the top. A tin can with both ends removed makes a good chimney.

A surprisingly efficient gasoline stove can be made from two cans. The outer can, a number 10 can, is pierced with nail holes from the top to within about one and a half inches from the bottom. Clean sand is then put into the can filling it up to the level of the holes. The sand is then saturated with gasoline. The inner can, which may be any type can of smaller size, is punctured with holes in the body and the top, and placed in the center of the larger can, top up. The nail holes furnish a draft and upward direction of heat. If no better way is available, you can hang a kettle of food over an open fire, a green pole lying in the crotches of two upright posts forms support. (See Fig. 10-8).

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Figure 10-8.—Improvised stove.

DISPOSING OF WASTE

As the Senior Commissaryman in the field, you will be faced with the disposition of waste materials. Garbage is best disposed of by burying or burning. To bury garbage, dig a trench four feet or more deep, dump the garbage into the pit, pack it down in layers, and cover the exposed layer with a few inches of dirt each day. When you abandon the garbage site, cover it with a minimum of two feet of mounded earth.

To incinerate garbage, all excess moisture must first be removed. The crosstrench incinerator provides one of the best methods of burning garbage. To construct such a trench dig two trenches eight feet long, one foot wide, and one foot deep, which will cross at their centers. The bottom of each trench should taper up to the level of the ground toward the end. A grate made of pieces of scrap iron, or pipe about twenty four inches long is built over the centers. At the intersection of the trenches, build a coal or wood fire, and when the fire has become hot enough, rubbish or drained garbage may be added as fuel. This incinerator functions best if three of the four sides of the trenches are blocked off, leaving the one open toward the direction of the wind.

This type of cross trench fire can be used for cooking as well as incinerating. Two of them are sufficient to prepare meals for one hundred men, and six of them are enough to prepare meals for five hundred men.

To dispose of cans, either wash them and use them as substitutes for cooking and eating utencils, or open both ends, flatten them, and bury them with the garbage. Glass jars can also be used as substitute eating utensils. When disposing of glass jars, break them up and bury them with the garbage.

Liquid wastes such as grease, except any usable grease or waste fat which can be used for cooking, may be burned or buried with the garbage. Other wastes are best disposed of in the soakage pit. This pit should be located at a minimum of twenty-five feet from the kitchen area.

COMBAT RATIONS

In the heat of battle it may be impossible to prepare ANY food for a long period of time. That's where the individual combat meal (C Rations) fits in. Once field kitchens have been set up B operational rations can be used. These

battle rations have been carefully prepared so that the necessary food values are provided in a form that can be used under battle conditions. B and C rations are used by all services.

B OPERATIONAL RATION

B rations are designed for large group feedings in situations when it is impossible to provide perishable foods because of lack of refrigeration facilities, but when, nevertheless, kitchen and cooking facilities are available.

The B ration may include canned meats, cereals and cereal products, canned fruits, canned milk products, canned vegetables and legumes, dehydrated fruits and vegetables, dry milk, and dried whole eggs.

The Standard "B" Ration for the Armed Forces, NAVSUP Publication 274 contains general information, a list of standard B ration items, standard B ration menus, recipes and related data, and requirements for 1000 rations.

The following consists of a typical menu of three meals for 1 day, taken from the *Standard "B" Ration for the Armed Forces*:

TYPICAL MENU

THIRD DAY

BREAKFAST

Orange Juice (F-2)
Hot Wheat Cereal (D-1)
Griddle Cakes W/Hot
  Maple Syrup (B-6)
Bacon (G-1)
Bread
Margarine
Jelly
Coffee (A-2)

DINNER

Tomato-Vegetable Soup
  (I-6) W/Crackers
Baked Chicken and Rice (G-9)
Cranberry Sauce
Buttered Green Beans (J-1)
Sweet Pickles
Bread
Margarine
Yellow Cake (C-1) W/chocolate
  Cream Icing (C-4) Coffee (A-2)

SUPPER

Grilled Corned Beef (G-4)
Mustard
Lyonnaise Potatoes (J-15)
Stewed Tomatoes (J-20)
Cabbage and Green Pepper
Salad (H-1)
Cornbread (B-4)
Margarine
Jam
Spiced Applies (C-8)
Coffee (A-2)

Recipes for recipe card numbers shown on this menu are included in the *Standard "B" Ration for the Armed Forces*, NAVSUP Publication 274.

MEAL, COMBAT, INDIVIDUAL

The meal, combat, individual is designed to be used when the tactical situation is so unstable that not even messing in small groups is possible and no kitchen facilities are available. It may be eaten either hot or cold, and is packaged so that it can be carried by the individual. If possible, and depending upon the tactical situation, one-burner stoves, heating tablets, or improvised methods may be used to heat the ration.

Each ration consists of three menus of packaged precooked or prepared foods. The meal, combat, individual, has 12 different menus. Each menu contains one canned meat; one canned fruit, bread or dessert item; one B unit; an accessory packet containing cigarettes, matches, chewing gum, toilet paper, coffee, cream, sugar, and salt; and a spoon. Four can openers are provided in each case of 12 meals. Each meal contains approximately 1200 calories.

This ration is intended for limited use only and should not be used for periods longer than necessary. The ration must meet stringent stability requirements and this limits the number of

food items which are usable. Repeated use of the limited menus available will soon lead to monotony, lowered acceptability, and eventually, to refusal by the men to eat certain components or even the whole ration. The danger that this attitude, if sufficiently widespread, could present during a combat situation is apparent.

The following consists of a typical menu of three meals for 1 day:

Typical Menus

Beefsteak
Pears
B-1 Unit
  Crackers (7)
  Candy Disc
  Peanut Butter
Accessory packet

Beefsteak & Potatoes
  w/Gravy
Pecan Cake Roll
B-2 Unit
  Crackers (4)
  Cheese Spread
Accessory Packet

Boned Chicken
Bread
B-3 Unit
  Cookies
  Cocoa Beverage Powder
  Jam
Accessory Packet

FOOD PREPARATION AND COOKING

When food is prepared and served in a field kitchen, procedures used in a galley aboard ship should be followed as closely as possible. Safety standards must be stressed. Place emphasis on portion control in serving, since the supply of food may be limited to the actual needs of the troops to be fed. You will be expected to plan your work so that there are no delays in the serving line.

Food must be provided in forms as familiar and acceptable to the group to be fed as possible. Salads should not be made with meats, fish, poultry, or potatoes. Meat and poultry dressings are not recommended; meats should be cooked beyond the medium stage of doneness, (pork is always cooked well done, as are other white meats). Cream fillings, cream sauces, creamed meats, custards and raw (unpasteurized) milk should not be used. Hashes, croquettes, meat pies, and ground meats are readily susceptible to contamination, and should be served promptly, if they are used. Again remember the rule: keep hot foods hot, and cold foods cold.

It has been found that in an emergency the easiest and fastest things to prepare are sandwiches, and in combination with a hot soup, or a nutritious hot beverage they provide an excellent meal. The sandwich fillings in the following list are some of those least subject to contamination or spoilage:

Peanut butter	Frankfurter and mustard
Plain roast beef	Bacon and peanut butter
Cheese, American or Swiss	Corned beef and pickle relish

EMERGENCY COFFEE

Very good coffee can be made with limited equipment if you follow correct procedures. The basic Navy recipe for making emergency coffee uses 3 pounds of coffee to 7-1/2 gallons of water. Directions are as follows:

1. Pour water into a container of adequate size.
2. Heat the water to the boiling point, 212°F.
3. Pour coffee grounds into the boiling water and stir.
4. Reduce the heat to just below the boiling point.
5. Let the coffee brew for 10 to 12 minutes, being careful not to let it boil.
6. Settle the grounds by sprinkling in a small amount of cold water.
7. Carefully ladle or pour the coffee into another container. Use care in removing so as to leave most of the grounds in the kettle.

SANITATION

Because of limited facilities in a combat area, the use of proper sanitary measures is even more important than it is in the general mess. Every precaution must be taken to see that food does not become infected and that mess utensils do not become contaminated. The personal hygiene measures discussed in Chapter 11 should be enforced rigorously.

A corrugated can of boiling water may be placed at the head of the serving line so that mess kits may be predipped. Predipping will partly sterilize mess utensils and, in cold weather, will give them a desirable warmth.

FIELD DISHWASHING

The field dishwashing unit consists of three corrugated cans in line to form a battery. As many such batteries may be used as needed to handle the flow of traffic during the meal period. Additional cans may be used for garbage and waste and a second rinse. The recommended battery is made up as follows:

First Can – Garbage and waste.

Second Can – Contains prewash warm water, detergent, and a long handled scrub brush attached. Change the prewash water as frequently as necessary to avoid carryover of grease and food particles into the rest of the system.

Third Can – Contains hot water (120° F to 140° F) with an adequate amount of detergent so that washing is accomplished quickly and adequately. This can should have a long handled scrub brush attached.

Fourth Can – Contains actively boiling water for first rinse.

Fifth Can – Contains actively boiling water for second rinse.

One battery will accommodate 80 people.

After washing the utensils thoroughly in the wash cans, immerse them for a total of 30 seconds in the two rinse cans. When water is actively boiling, this procedure will achieve sanitization. Hot water is the preferred method of sanitization, but chemicals may be used.

After the battery has been secured, scrub the cans thoroughly, flush them, and invert to allow complete draining and drying. Mark each can for its designated use. This will aid in restricting use of each can to the one purpose for which it is intended.

For complete information on field dishwashing, and sanitization refer to the *Manual of Naval Preventive Medicine*, NAVMED P-5010, chapter 1.

Normally, when you are operating in the field you will have special problems with sewage disposal, garbage and refuse disposal and vector control. These areas are all covered in the *Manual of Naval Preventive Medicine*, NAVMED P-5010 and the *Landing Party Manual*, OPNAV p 34-03. Because of the apparent health hazards that are ever present in these areas, you must be familiar with the contents of these publications.

HANDWASHING FACILITY

The handwashing facility has the advantage of being both simple and sanitary. You may have to use this method in the field if there are no other means available. In order to construct one, you would need:

- Two number 10 tin cans or other metal containers for water, with bails and tilt handles.
- One length of iron rod, pipe or wood from which to suspend the cans.
- Six lengths of wood to form tripods, with cord or wire for taping.

First, erect the tripods. Then put bails and tilt handles on the cans, and suspend the cans on the pole and tie them to it. Then place the pole on

the tripods. (The area below the cans should be filled with sand or gravel so that the water from the cans will drain off and not form a mud puddle.

When you are ready to use the unit, fill one can with soapy water and the other with a disinfecting solution consisting of one ounce of any ordinary household laundry bleach to two gallons of water. Each man using it may first pour the soapy water over his hands and then rinse them with the disinfecting solution. You should provide single-service paper towels for each person or else insist that the hands be air dried, to prevent reinfection. If you provide single towels, provide a trash can as well.

PEST CONTROL

Sanitray precautions include measures to destroy pests and prevent their breeding. The two most important types for you to control are flies and rodents.

Flies

In areas where flies are present in large numbers, special care must be taken. The housefly breeds in excrement of human beings and animals, as well as decomposing vegetable and animal matter. Disease organisms are carried on the feet of the fly to food and mess utensils. The fly takes only liquid foods and regurgitates to dissolve solids, causing further contamination.

Great care should be taken to prevent access of flies to food, mess gear, kitchens, and messhalls. In a permanent camp, the kitchens, messhalls, garbage cans, and latrines should be screened. It should be a standard operating procedure that the galley be screened before hot food is prepared in it. Screens should have a mesh of 18 wires to the inch, which also keeps out mosquitoes. In a semipermanent camp, screening may be impractical; consequently, dependence must be placed upon cleanliness and insect proof containers.

In the absence of metal screening, mosquito netting, target cloth, or similar material may be used to flyproof tents, galleys, shacks, et cetera. Leaking screens (especially cracks around the screen door) frequently convert a building into a flytrap; i.e., flies are able to enter the building but unable to make an exit. Screen doors should be made to open outward and should be in direct sunlight, when practicable. Fly breeding in human excreta is particularly dangerous; thus latrines, wherever possible, should be carefully flyproofed.

The substances which may be used to kill the adult fly are often extremely poisonous. For example, DDT is a poison primarily affecting the central nervous system, but it can cause damage to other tissues and organs as well. Thus, the use of these substances is the responsibility of the medical officer, as is the use of measures to prevent the breeding of flies. But it is up to you to keep flies off the food in the galley and mess. When flies are present, food servers should keep covers on serving containers except when they are actually placing food on a mess tray.

Use traps or fly swatters freely. Sticky fly paper can be made by heating castor oil (5 parts by weight) and powdered resin (8 parts) until the resin is dissolved. Don't boil this solution. Apply it to glazed paper while it is still hot or paint it on iron hoops or wire strands. Wires so painted should be cleaned and recoated every 2 or 3 days.

Rodents

The rodent is an ever present menace to operations in the field. Such rodents as rats, mice, and ground squirrels are reservoirs for plague, endemic typhus, tularemia, and many other debilitating diseases. When operations become more stable and permanent and semipermanent camps are established, the additional hazard of destruction of material must be considered. The distribution of rodents may be considered universal; hence, the problem of their control is faced during operation in any geographical location.

Rodent control is the responsibility of the medical officer, but the proper handling of food and prompt disposal of trash and garbage is essential and lies within your domain. Food supplies should be stock-piled on elevated platforms. If possible, all food stores should be packaged in ratproofed containers. When buildings are used, all doors should be self-closing and

tight-fitting. All other openings in excess of 1/2 inch should be closed with a material resistant to gnawing rodents or screened with 1/2 inch mesh hardware cloth. *The Manual of Naval Preventive Medicine*, NAVMED P-5010 has additional information on the destruction of rodents.

CHAPTER 11

SANITATION IN FOOD SERVICE

The role of safe and wholesome food, as a contributing factor to good health, is commonly recognized. Federal laws and Navy requirements normally ensure that the food which comes aboard your ship is safe and wholesome. However, the manner is which food is sometimes prepared and served in the general mess can nullify all the care that has been exercised in the previous processing. For example, even when milk has been purchased from clean farms and has been pasteurized effectively in a modern dairy plant, it can become the vehicle of disease if served in the mess in a contaminated glass.

The medical authorities in the Navy stress the constant need of education in recommended sanitary practices for food service personnel.

Close liaison with the medical department will result in an effective working arrangement to discover and correct unsanitary practices.

Food-service training should be given with the attitude of accomplishing its purpose rather than fulfilling an administrative function for record purposes. A minimum of 6 hours of instruction is merely a guide. Training should be designed to meet specific requirements of each food-service facility. As a senior Commissaryman it will be up to you to keep a close check on your food service personnel to ensure that they practice sanitary techniques and good personal hygiene habits while they are preparing, cooking, and serving food.

The course *Commissaryman 3&2* discussed the sources of food-borne illness and the principles of food sanitation to help you develop an attitude of concern for maintaining proper sanitary practices and the knowledge necessary to carry out these practices. The present chapter is directed at your role as a senior Commissaryman in the supervision of other food-service personnel. It is concerned with your responsibility for training these personnel and for conducting inspections to see that proper sanitation is maintained. It provides a comprehensive outline of areas where training and constant inspection are required and gives many practical suggestions for maintaining sanitary conditions, as well as lists of dangers to be avoided. This chapter is intended to help you find the answers to such questions as:

- What rules should be posted in the food service and scullery spaces?
- What instructions must be adhered to in the manufacture of ice cream?
- What is the maximum time permitted for holding cooked protein foods at temperatures between 40°F and 140°F?
- What situations are most likely to cause food contamination?

FOOD-BORNE ILLNESS

In order to combat food-borne illness, it is necessary to know how food becomes contaminiated, how contaminating factors like bacteria live and how to destroy them. Bacteria can move only in liquids and cannot leave a fluid surface unless transported as PASSENGERS by other agents. Such agents may be dust, food, dishes, silverware, cooking utensils, dirty fingers or fingernails, a common drinking cup or hand towel, moving air or water, insects, or rodents. They may also be carried in droplets of nasal or oral discharges of people when talking, sneezing, or coughing.

Upon entering the body, bacteria take from several hours to days to multiply in sufficient

numbers to produce symptoms of a disease. Such a period of time is known as the incubation period and varies with the particular kind of disease.

When harmful organisms enter the human body by way of food or drink and eventually cause illness, the result is known as food-borne illness.

In *Commissaryman 3&2* you have learned that there are two main types of food-borne illness. In one type, the food actually contains poison and in the second type, illness is caused by food that serves as a carrier of bacteria or animal parasites.

As a Commissaryman First or a Chief Commissaryman, you are in a position to help safeguard the health of all who eat in the general mess by instructing food-service personnel about:

- The nature of diseases which can be transmitted by foods.
- The bacteria, viruses, parasites, and chemical agents responsible for such diseases.
- Their role in preventing food-borne diseases by proper sanitary precautions in the preparation and serving of food.

PERSONAL HYGIENE

Food-service personnel are a most important link in the transmission of disease through foods. Their health and habits are vital factors that affect the health and well-being of the entire ship's company.

Practice of good personal hygiene and the application of recommended food-handling techniques are essential. To ensure that these objectives are accomplished, all food-service personnel in the Navy are required by SECNAV Instruction 4061.1 series to receive formal training in food sanitation in addition to continuing, supervised, on-the-job training. You as a supervisor must ensure that these personnel receive a thorough indoctrination in recommended food-handling techniques and the importance of maintaining high standards of personal cleanliness.

All food-service personnel should be examined by the medical department and found free from communicable disease prior to assignment in food service.

WHEN PERSONNEL HAVE BEEN AWAY FROM THEIR DUTIES FOR THIRTY DAYS OR MORE THEY MUST HAVE A MEDICAL EXAMINATION BEFORE RESUMPTION OF DUTY.

Continuing supervision of all food-service personnel is a must in order to detect diseases which may develop after primary physical screening. It is up to you to see that persons with outward signs of illness or disease, or with pimples, boils, skin eruptions, cuts, unusual skin blemishes, diarrhea, or heavy colds or other respiratory infection never serve food.

The set of rules given below should serve or prepare you as a guide and check-off list in instructing and supervising your men. It may also be used with such additions as you consider desirable–as a checkoff list and reminder to be posted in the food service and scullery spaces.

- Food should not be handled by anyone with infected cuts or sores on his hands or fingers.
- Food should be touched with the hands only when necessary. Forks, tongs, or ladles should be used instead.
- Anyone handling clean and sanitized eating utensils should not touch any portion that may contact someone's mouth. Glasses should be grasped by the base; cups and silverware, by the handles.
- Fingers should never be placed in the mouth to remove food residue, nor moistened with saliva to facilitate handling paper used to wrap food.
- Anyone handling food should not scratch his scalp. Hands should be kept away from the nose, mouth, face, hair, and ears.
- Hands should be washed frequently with soap and hot water while food is being prepared and ALWAYS after a visit to the head.
- A food handler should never sneeze, cough, or blow his nose over food.
- No smoking is the rule in food preparation and food service areas.

- Caps should be worn to prevent hair from falling into food.
- Outer garments of anyone working around food should be clean and washable.
- Clothing or personal effects of food-service personnel must NOT be kept in food preparation and serving areas. Personnel should not be allowed to change clothes in these areas.

FACE MASK

With the implementation of the Chief of Naval Operations Z gram 70, beards and mustaches are allowed as long as they comply with the standards of military appearance set down by that Z gram. The Bureau of Medicine and Surgery, Environmental Health Branch has promulgated OPNAV Instrution 6240.6. This instruction requires that an appropriate mask be worn while food handling functions are being performed. Food handlers' beards must be kept trimmed to no longer than 1 inch and must be covered with a mask. No one with a beard should be allowed to work in the preparation of food unless an appropriate mask is worn.

MESS HOUSEKEEPING

Basically, sanitation in the general mess is just good housekeeping. All spaces used for storage, preparation, and serving of food—including clean-up sapces— should be scrupulously clean at all times. All utensils used should be washed and rinsed in water 180°F or above and allowed to dry, and stored so that they are not exposed to dust or insects before their next issue. Sanitary practices in the scullery are discussed in detail in chapter 3.

STORAGE OF FOOD

Correct storage procedures play a major part in preventing food-borne illness. The maintenance of proper temperatures, air circulation, and humidity is necessary to preserve foodstuffs and prevent spoilage and subsequent growth of pathogenic (disease-producing) organisms. High standards of sanitation must be maintained in storerooms and refrigerated spaces.

Supply storage buildings and spaces should be protected against insect and rodent invasion. Place food items on pallets to facilitate cleaning and prevent insect and rodent harborage, and to improve accessibility and orderliness. Age is a contributing factor in food spoilage. This factor compels an observance of the basic principle of storage that oldest items should be used first, except when the condition of a newer item is such that it must be given priority.

GARBAGE DISPOSAL

All garbage and refuse should be deposited immediately in rodent- and vermin-proof containers with tight covers. No material should be allowed to accumulate which might harbor or attract rodents and insects.

Except in harbors and in areas of ship concentration, garbage is usually disposed of by overboard discharge. It is up to you to see that garbage is not allowed to collect in the food preparation spaces, mess decks, or on the fantail, and that it is not spilled in galleys, sculleries, and passageways. Garbage cans should be scrubbed clean, and disinfected after each use.

Garbage Grinders

For the most part, garbage grinders have eliminated the problem of telltale debris in combat areas. Garbage grinders are installed in garbage grinder rooms and in sculleries on board ship. For those installed in garbage grinder rooms salt water is used for flushing the hopper and the drain. For sanitary reasons, instruct your men to keep the covers on the openings to the feed chute while the machine is in operation. If this is not done, a mist of salt water and garbage is sprayed into the room by the machine due to its relatively high rotation. The mist settles on surfaces in the garbage grinder room.

When salt water is used for flushing the hopper, the grinder should not be used if the ship is in contaminated waters or close anchorage. Instruction plates, with letters at

least 1/4 inch high, should be installed on the bulkhead adjacent to the grinder with the following inscription: "Grinders shall not be used when the ship is in polluted water or congested anchorages."

Only fresh water should be introduced into the hopper, feed chute, or grinder body of garbage grinders located in sculleries or food service areas. Bulk garbage from food preparation spaces should not be disposed of via scullery units.

Operation and Care of Garbage Grinders

Before operating a garbage grinder, see that your men study the operator's manual carefully. The manual includes a description of the machine and instruction for operation and maintenance.

The machine should always be operating at full speed before garbage is fed into the hopper or chute. The 400-pound grinder should not be fed at a rate in excess of 7 pounds (approximately 1 gallon) per minute; the 1600-pound grinder should not be fed at a rate in excess of 28 pounds (approximately 4 gallons) per minute. Items such as metal, tableware, glass, china, leather, ham or bacon rinds, rags, paper, bones (larger than 3/4-inch diameter for the size 400 grinder and larger than 1-inch diameter for the size 1600 grinder), feathers, corn husks, and chicken entrails must not be placed in the grinder. Grinders should not be stopped when garbage is in the machine.

Always clean the grinder and hopper thoroughly, immediately after each period of operation.

HANDLING AND DISPENSING OF BULK MILK AND NONMILK BEVERAGES

When you are attached to a ship or station which has Navy-owned, refrigerated bulk milk dispenser cabinets and Navy-owned, stainless steel containers (milk can type) you may use such equipment to dispense beverages other than fresh whole milk. This should be done in accordance with the requirements and conditions of Minimum Sanitary Standards for the Equipment and Methods for the Handling of Milk and Milk Products in Bulk Milk Dispensing Operations (MIL-STD-175B) and current SECNAV Instructions.

Only Navy-owned, stainless steel containers should be used for mixing and storing of cold nonmilk beverages, reconstituted milk, and sterilized whole milk, and these containers must not be used for any other purpose. Multiservice containers in which fresh whole milk is received from a dairy should not be refilled or used for any other purpose before being returned to the dairy. After single-service bulk milk containers have been emptied, they should be destroyed.

COLD NONMILK BEVERAGES

Cold nonmilk beverages may be prepared and stored in Navy-owned stainless steel containers and dispensed from Navy-owned dispenser cabinets provided that:

1. Single service delivery tubes which meet the requirements of MIL-STD-175B are attached to the containers prior to the preparation of the beverage and that these tubes are procured sterile and are destroyed after use.
2. The cleaning and sanitizing of the containers are accomplished as prescribed in the Manual of Naval Preventive Medicine.
3. Immediately after preparation, the beverages are chilled to 45°F, or below, preferably in a refrigerator.

RECONSTITUTED MILK

Reconstitution is the process of restoring concentrated or dehydrated milk products to their normal state. This is accomplished by adding the required volume of water to produce whole, single strength milk. Milk may be reconstituted in Navy-owned, stainless steel containers and dispensed from Navy-owned refrigerated bulk milk dispenser cabinets provided that:

- The containers are sanitized as prescribed in the Manual of Naval Preventive Medicine immediately prior to use.

- The correct amount of cool, potable water is put in the container and the correct amount of powdered or concentrated milk added and then agitated with an approved mixing device.
- Immediately after preparation, the milk is cooled to 45°F, or below, in a refrigerator and maintained at or below that temperature until placed in the dispenser cabinet.
- Ice is never added to the product for any reason.
- A single-service delivery tube meeting the requirements of (MIL-STD-175B, is attached to the container prior to the preparation of the product and destroyed after the container has been emptied.
- The container is cleaned and sanitized immediately after being emptied to preclude the difficulty experienced in properly cleaning a container in which milk has dried.
- The mixing device and measuring instruments are kept clean and are sanitized immediately prior to use.

STERILIZED MILK

Sterilized, whole milk (canned) may be dispensed from a Navy-owned refrigerated bulk milk dispenser cabinet provided that:

- The sterilized milk is transferred from its original container to a Navy-owned, stainless steel dispensing container (milk can type) in a sanitary manner.
- The dispenser container is sanitized immediately prior to filling.
- The top of the sterilized milk container and the opening device are cleaned and sanitized before the container is opened.
- Immediately after transfer, the milk is chilled to 45°F, or lower, in a refrigerator and maintained at that temperature or lower, until placed in the dispenser cabinet.
- Ice is never added to the milk for any reason.

CANNED EVAPORATED MILK

When canned evaporated milk is used, tops of cans must be thoroughly cleaned then punctured with a sanitized cutting instrument. Open canned milk must be refrigerated between serving periods, and at no time remain out of refrigeration for more than a period of 2 hours.

DRIED MILK PRODUCTS

The following dried milk products, if authorized for use, may be procured and used in cooking, preparation of frozen and chilled desserts, and beverage drinks such as reconstituted milk:

Milk, powdered, dry, cocoa-flavored
Beverage powder, cocoa
Milk, dry, whole
Milk, dry, nonfat, instant
Milk, dry, nonfat, regular
Ice cream mix, paste
Ice cream mix, powder

The use of dried milk products in cooking is highly recommended from a nutritional standpoint, and little danger results from such foods when properly cooked. Their use in beverage drinks and preparation of frozen desserts entails certain hazards requiring rigid supervision to ensure that the following sanitary precautions are adhered to.

Only safe potable water must be used to prepare dried milk products.

Utensils and apparatus used in preparation of products must be thoroughly cleaned after each use. After thorough cleaning of parts that come into contact with products, they must be either sanitized with a 200 ppm chlorine solution or rinsed in water at a temperature of 180°F, for at least 1 minute. These parts must again be sanitized immediately prior to use after assembling.

The storage place for utensils used in preparation of dried-milk products must be scrupulously clean. This includes storage for pitchers, stock pots, steam table inserts, stirring or beating whips or devices, and special milk containers and dispensers.

A clean cover must be kept over mix and ingredients whenever possible.

Immediately after mixing, products that are not to be consumed at once must be chilled to a

temperature of 45°F or below. The best temperature for storage of prepared mixes is 30° to 33°F.

ICE CREAM

Ice cream served in the general mess must be produced in a sanitary manner, under competent sanitary supervision. The dairy products used in its manufacture must meet Federal specifications for pasteurized milk.

The following instructions must be adhered to in the local manufacture of ice cream:

- The operator must be scrupulously clean.
- The mixing vats, the ice cream freezer and its gaskets, and the cans for the final products must be cleaned thoroughly with hot water, soap, and a brush after use.
- After cleaning they must be rinsed with not less than 180°F water.
- This is followed by a rinse with cold water containing 200 ppm of residual chlorine.
- Utensils must be rinsed with not less than 180°F water before they are used again.
- As soon as water is added to the mix, it must be placed in the refrigerator and covered.
- When it is sufficiently chilled, it should be transferred directly to the freezer.
- As soon as the product emerges from the freezer into the containers, it must be covered and placed in the hardening box immediately. Ice cream must be stored at temperatures of 0°F or lower.
- Ice cream must never be refrozen once it has melted.
- The freezers are to be installed in a separate room or enclosure which is locked. This serves to limit the number of people who have access to the ice cream. (In order for the above instructions to be carried out effectively, the number of people concerned with the manufacture of ice cream must be limited to no more than two.)
- Spoons, spatulas, dippers, scoops, et cetera, used for dispensing ice cream and other frozen desserts, must be kept in either running water or in water which is maintained at 180°F between servings.
- Covers of dispensing cabinet wells should be closed when the wells are not in use, not only for retaining the proper temperatures, but also to prevent foreign substances entering, excessive condensation, and/or unnecessary exposure.

BULK AND CUBE ICE

Bacteria are not destroyed in ice. Bacteriologists have found that disease-producing bacteria can survive for long periods in ice. In fact, freezing is now a common method of preserving cultures of certain micro-organisms.

When bulk ice is removed from storage, it should always be washed before it is used. Block, cubed, or flake ice must always be manufactured of potable water and 2 to 5 ppm of available chlorine may be introduced into the water to reduce bacteria and coliform (colon bacilli) counts and acts as a safeguard against contamination introduced by poor processing and handling techniques.

All ice which comes in contact with food or drink must come from sources approved by competent health authorities and must be kept free from contamination while in storage and when being handled. Since most plants assure themselves of a safe water supply, contamination of ice is generally the result of:

- Unsanitary manufacturing routines, or
- Unsanitary handling practices.

Ice must be stored in a room of satisfactory construction, preferably one with easily removable flooring, such as duckboards. If foods are stored in the same room, they must be stored off the floor and must not come in contact with the ice; nor should they be stored overhead where they could drip or spill and contaminate the ice beneath.

Cake or block ice must be handled with tongs, and processed ice, in sanitary bags. Block ice must be cut in the plant to cakes not over 75 pounds in weight to simplify handling and storage. Ice must not be left on the street, sidewalk, or dock during delivery, unless protected in a sanitary manner and then thoroughly cleaned prior to use.

Ice to be ground or crushed must be thoroughly washed with potable water prior to being placed in the grinder or crusher. The grinder or crusher must be located in a satisfactorily covered structure protected from air-borne contamination. The containers used for delivery of the ice must be clean, sanitary, and kept covered during delivery. When canvas containers are used, they must be washed with fresh water and sanitized thoroughly after each use.

PREPARING AND SERVING MEALS

You know that food is at its best, in both taste and nutritive value, when the time between preparation and serving is kept to a minimum. You are familiar with the statement HOT FOOD MUST BE HOT, AND COLD FOOD COLD. Don't overlook, or permit your men to overlook, the fact that these principles also are vital to preventive of food-borne diseases.

If, for any reason, food is to be held longer than 3 hours after it has been cooked, either see that it is thoroughly chilled to a temperature of 40°F or lower as soon as possible after it is cooked or hold it at a temperature of 140°F or higher. These temperatures hold development of pathogenic bacteria to a minimum. In order to prevent contamination, keep food covered while it is awaiting preparation or serving.

Food items such as dried eggs and vegetables are susceptible to spoilage after reconsistution. Dehydrated foods should be cooked or refrigerated immediately following reconstitution. Additional information on the preparation of food items can be found in chapter six of *Food Service Operations*, NAVSUP P-421.

MEATS AND CHOPPED FOODS

Poultry, hash, sausage, pork, veal, beef, meat broth, soups, gravies, creamed chicken, dressings, and bread pudding, must be prepared so that there is a minimum time lapse between preparation and serving.

Foods which must be touched with the hands when they are being prepared, such as cooked meat, ground meats, and peeled boiled eggs, must be prepared just before cooking and serving. It is up to you to supervise their preparation very carefully.

Food which has been ground or chopped and is to be later cooked or incorporated in a made-dish should be refrigerated immediately. Such ground or chopped food should be refrigerated in shallow pans filled to a depth of not more than 3 inches and should be covered until cooked. When food is ground, an increase in area for contaimination and growth of harmful bacteria results. When chilled foods are ground, the grinding process warms the food to the point where bacterial growth may start.

PASTRIES

If pastries, especially the cream or custard-filled ones, are made in the bakeshop, they must be freshly prepared when they are served. Be sure that the most scrupulous cleanliness is maintained in the bakeshop.

All cream-filled foods must be covered and placed in a refrigerator immediately until they are served, and they must adhere to the three hour rule; that is, from the time of preparation to the time of service. When it is not possible to chill cream-filled foods, they should not be prepared or served. Serving cream or custard-filled pastries during the hot weather season is extremely hazardous unless every precaution is taken to hold them below 40° from the time of preparation until they are served.

FROZEN FOODS

See that thawed food is used as soon as it is thawed and not held in food-service refrigerators for periods longer than 24 hours. Frozen foods that have been defrosted should never be refrozen. Chilled foods which show any signs of spoilage should never be frozen. Frozen meats and fish should not be defrosted by exposure to excessive heat or by immersion in water. Whether they are fresh or frozen, pork and other meat products containing uncooked pork muscle tissue must be thoroughly heated until the center reaches a temperature of 170°F.

FRESH VEGETABLES

Fresh vegetables that have been grown in areas where fecal material is used as fertilizer or are considered contaminated by the Medical Department Representative must be thoroughly cooked or washed and chemically sanitized by approved methods prior to serving. Vegetables that have been peeled before cooking should be kept in water for only short periods of time.

Salads should be freshly prepared and served as soon as possible. They must be kept covered in the refrigerator until serving time. Salads containing leftover meat must always be freshly prepared when they are served, and the meat must be thoroughly chilled before it is put in the salad.

SALAD BARS

Salad bars may be set up on a self-service basis. To assure proper refrigeration, place all salad bar items in pans or trays and pre-chill prior to placing them on the salad bar. The pans and/or trays should be placed on a bed of ice or an electrically refrigerated salad bar unit. Proper drainage is essential if ice is used to chill salad bar items.

When the use of ice is not possible, the salad bar should be large enough to accommodate shallow pans or trays of salad bar items which are taken directly from the refrigerated spaces. Because of the high temperatures of most dining areas, easily contaminated foods (salad mixtures containing meat, fish, poultry, eggs, cooked salad dressing and mayonnaise) should be placed on the salad bar in small quantities and replenished as needed. All such items and any mayonnaise or cooked salad dressing remaining on the salad bar after completion of the meal period should be destroyed.

Arrange salad bar items so as to eliminate the necessity of reaching over one container of food to another.

OTHER SELF-SERVICE ITEMS

Food items other than salads, that are permitted in self-service areas are bread, butter, crackers, relishes, condiments, beverages, and certain types of desserts. Desserts which may be self-served are:

- Desserts preportioned in individual dishes.
- Individually wrapped portions of ice cream.
- Cookies.
- Fruits (fresh, canned, stewed, and frozen).
- Fruit flavored gelatin.

Desserts such as cakes, pies, puddings, and bulk ice cream should not be self-served unless set up in individual dishes.

The Commissaryman in charge of the serving line should ensure sanitary self-service conditions by having an adequate number of appropriate serving utensils near or with the foods designated for self-service. Self-service lines should be carefully supervised throughout the meal period to keep foods neatly arranged and replenished as needed.

You are not authorized to permit self-service of items other than those listed in the preceding paragraphs unless authority has been received in writing from the medical officer or his representative.

LEFTOVERS

Plan your meals to avoid having leftover foods. When there are leftovers, have them placed in shallow containers not over 3 inches deep, covered with the container lid or waxed paper, and tagged with date and the time of refrigeration. Care must be taken to assure thorough and prompt chilling to the center of the mass of food. Then use leftovers at the next appropriate meal if at all possible. Never use the foods after 36 hours.

SPECIAL MEALS

The 3-hour maximum time permitted for holding cooked protein foods at temperatures between 40°F and 140°F is of particular importance in the case of special meals (boat meals, flight meals, and recreation parties). When preparing and using sandwich fillings containing meat, meat food products, poultry,

fish, or eggs, it is essential that close galley supervision and liaison with using units be maintained to ensure continuous refrigeration. These foods should be prepared and cooked in accordance with the methods prescribed in the Armed Forces Recipe Service. Do not hold fillings discussed above any longer than 3 hours between temperatures of 40°F and 140°F (total elapsed time in the galley and aboard aircraft or boats). Unopened cans of meat, chicken, and tuna may be used in lieu of meat sandwiches when consumption is not anticipated within the 3-hour time limit between 40° and 140°F. In these instances you can issue bread and butter sandwiches with the canned items to permit members of the using unit to make their own sandwiches if they so desire.

The preferred method of handling sandwiches for flight and boat meals is as prescribed in the paragraph above. If it is not feasible to follow this procedure, sandwiches may be frozen and handled in the following manner:

- Freeze only freshly prepared sandwiches that contain ingredients suitable for freezing.
- Wrap each sandwich separately in a double thickness of heavy waxed paper or in moisture-vapor-resistant material. Fold wrapping material tightly and seal. Mark the wrapper, using a wax pencil to indicate that the sandwich has been frozen and the date of preparation.
- Immediately after wrapping, freeze sandwiches at 0°F, or below. Store at the same temperature. Do not store longer than 7 days.
- Inform using units that sandwiches must be consumed within 5 hours from issue (time begins when sandwiches are removed from the freezer).
- All types of flight rations must be carefully packaged to preclude the risk of contamination and exposure during transit from galley to plane.
- Further information on special feeding conditions (such as battle meals) and subsistence operations in case of nuclear, biological, or chemical warfare may be found in the NAVSUP Publications 486 and 421.

ON THE SERVING LINE

All foods must be served in a sanitary manner. On the serving line, except when food is actually being served, it should be protected by suitable covers or sneeze guards.

Excess quantities of food are not permitted on the serving line. Food can be replenished from the galley as it is needed. Water in steamtables must be kept at a temperature between 180°F and 200°F. Steamtable inserts should never be stacked one on top of the other nor should they be placed on the deck to wait until they can be put in the steamtable. Food in steamtables should be kept at a temperature in excess of 140°F.

SUMMARY OF DANGER POINTS

To summarize, your responsibilities for sanitation in food service require frequent training and retraining of your men and constant vigilance as a supervisor. The following lists summarize danger points that continually require instruction and inspection.

FOODS

Ham
Dressing
Hash and croquettes
Corned beef
Turkey
Chicken dressing and salad
Eggs
Creamed dishes
Scalloped dishes
Cream pies
Cream-filled pastry
Puddings
Cold meats
Salads
Pot pies
Milk and cottage cheese
Cheese
Leftovers in general
Any moist food that has stood warm for several hours

HUMAN SOURCES

Infections and cuts on hands and arms
Food service workers with diarrhea

Food service workers who have recently had diarrhea
Food service workers who have been through an outbreak of diarrhea but were not themselves sick
Dirty hands
Dirty aprons
Wiping face (pimples) with apron or dish towel
Failure to wash hands after visit to the head
Head colds, (sneezing on food or hands)

ANIMAL SOURCES

Contents of bowels of birds and animals
Rats and mice droppings or urine (in pans or on salad vegetables, meats, etc.)
Manure carried by flies

SITUATIONS

Inadequate washroom
No soap or towels in washroom
Washroom too far away
Overloaded galley facilities
Inadequate personnel
Inadequate training of personnel
Inadequate inspection of personnel
Crowded refrigerator space
Rat infestation

METHODS

Cooling too long before using
Keeping of leftovers without prompt refrigeration
Use of leftovers
Failure to refrigerate foods that are held long before serving
Poor stowage in refrigerators
Use of hands for mixing salads
Rinsing galley utensils without sanitizing them

CHAPTER 12

SAFETY PRECAUTIONS

When you become a Commissaryman First or Chief Commissaryman, you shoulder responsibility for the health and safety of those who work in the general mess. You should therefore make sure that all possible precautions and safety rules are observed. Train your men to practice safety. Set an example by following safety instructions and by making regular safety inspections.

Setting a personal example of good safety practice is perhaps the most important. You can't expect your men to observe safety rules that you violate. So remember to be a shining example.

Don't allow scuffling, pushing, or other forms of skylarking in the galley. It will not only interrupt the routine and cause unnecessary delays in getting out the meals, but somebody usually gets hurt. Fencing with a pair of butcher knives may be fun—but it can also be fatal.

Wearing safe, regulation footwear will help prevent accidents. Encourage your men to wear shoes with leather soles and rubber heels that give them a secure footing on the deck. Rubber or crepe soles are dangerous. Sandals and all types of open-toe shoes or shoes with thin soles should be avoided. Discourage the habit of keeping hands in pockets. In is unmilitary and sometimes dangerous—especially in heavy seas. Hands are needed for protection against falling.

Here are some questions that you should be able to answer after reading this chapter:

- What safety precautions should be observed when you are receiving and storing subsistence?
- What instructions should I give my men to reduce galley accidents?
- What should I teach them about fire prevention and fire fighting?

RECEIVING AND STORING SUPPLIES

Handling food supplies is not easy or light work because the food items are received in many sizes and types of containers. Mess personnel doing this type of work are likely to suffer strains unless they know how to lift heavy objects.

Teach your men the proper method of lifting. (See fig. 12-1) Improper use of the back muscles can cause serious injury. In order to lift properly a man should:

1. Get a firm grip on the container.
2. Get a firm footing, with his body weight distributed evenly.
3. Bend his knees, keep his back straight, and make sure the load is close to the body.
4. Using thigh and shoulder muscles, lift the load.

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Figure 12-1.—Lift the right way.

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5. Use a normal walking gait and make sure that he can see where he is going.
6. Ease the object to its resting place.

This method puts the strain on the leg muscles which are less easily injured than the back muscles.

It's up to you to see that there are enough men in the working party to safely handle bulky and heavy packages. Always handle cases with wire or metal bands with care. Do not lift a case by the metal or wire band. When bulky objects are carried, care must also be taken to see that the line of vision isn't cut off. Warn your men to be especially careful when they carry glass or sharp objects.

While food items and other supplies are being loaded, all other traffic should be routed to the opposite side of the ship. The route of the working party should be planned to prevent the men from getting in one another's way or tangling up with a loading crane.

Instruct your men in the proper way to go up and down a ladder. One hand should always be kept on the hand-rail or side of the hatch. Be sure that all ladders are clean, clear of obstructions, well lighted, and in good repair. Notify your supply officer if ladders need to be repaired. Be sure that the repair and supply officers are notified if a ladder gets bent during loading. Block the ladder off so that it cannot be used until it is repaired. If a ladder is taken out of a hatch while food items are being loaded with a davit or crane, righ a lifeline around the hatch before removing the ladder to prevent anyone from stepping into the hatch.

See to it that your men:

- Always stack safely; palce heavy food items on the lower shelves.
- Keep the aisles in the storeroom clear of objects.
- Wear work gloves when handling wooden cases.
- Keep the decks of the storerooms clean and dry.

SAFETY IN STOREROOMS

Are your storerooms safe? Better check on them. If they are, all items are properly stored and secured for sea in such a way as to prevent shifting or falling. There should be enough ventilation so that fires won't start from spontaneous combustion, and harmful gases will not accumulate. See that proper precautions are being taken against insects, and that everything is kept clean and shipshape. (See fig. 12-2.)

When ice cream is delivered packed in dry ice, remove the dry ice before storing the ice cream in the refrigerator. Otherwise, men opening cases in the refrigerator may suffocate. You should not let the dry ice come in contact with the skin, it may cause severe burns.

Walk-in type freezing rooms should not be entered without proper clothing. The signal light which indicates whether anyone is in the freezer should be checked daily to determine that it is in working order. The inside escape mechanism on the walk-in freeze boxes should also be checked frequently, to see if they are working properly.

When there is any evidence of escaping refrigeration gas, report it immediately to the engineering department.

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Figure 12-2.—Seaworthy storerooms.

If it becomes necessary to use pesticides in the storerooms, this is thy medical officer's responsibility. Follow his instructions and take all of the necessary precautions. You want to destroy insects, not sailors.

When storerooms are to be painted, always have at least one man on the outside, since it is possible that a man may be overcome by paint fumes and need help. Portable blowers kept in operation while the work is in progress will help prevent such accidents.

SAFETY IN WAREHOUSES

There are many safety factors to consider when you are in charge of a warehouse. Some of the important ones are discussed in the following paragraphs.

Floor load limits must be observed whether a warehouse is of single or multistory construction. Floor capacities should be determined and signs posted in conspicuous places stating the capacity of all floors in the area.

The load exerted on the floor by a stack of materials may be determined by dividing the total weight of the stack by the square foot area it covers on the floor. You can simplify such calculations by regarding the area of the standard pallet as 16 square feet, or approximately 13.3 square feet if a 40- by 48-inch standard pallet is used.

All palletized materials should be placed and secured so as not to present a hazard in stacking when in transit, inside warehouses, between warehouses, in storage, and between warehouses and piers, loading docks, and platforms.

All material should be stacked in an orderly manner so as not to present a hazard to personnel or likelihood of damage to the material or equipment.

Crushable containers should have vertical supports placed in such a manner that weight of material stored above will not be supported by the containers. Suitable protectors made from metal, wood, or cardboard should be placed at corners of material at aisle intersections to prevent damage to material and containers. Paint such protectors brilliant yellow, highlighted by black diagonal striping.

WORKING AISLES

Working aisles are those from which material is placed into and removed from storage. They are of two types: transportation aisles, running the length of the building, and cross aisles, running across the building. Aisles determine bay boundaries and, therefore, limit the space actually used for storage.

Aisles should lead directly to doors whenever practicable. With mechanical operation, turning corners slows movement. Most accidents involving equipment occur at corners or aisle intersections.

The aisle widths specified below are not the absolute limitations for all operations. They represent the dimensions under which most operations may be conducted. In fast-moving operations, aisle widths, at the discretion of the commanding officer, may be increased beyond those indicated below. They may also be decreased when speed of operation and space economy so dictate. Aisles should be established to assure uniformity between operation efficiency and space economy. The aisle widths specified below are based upon a load length of 40 inches.

2000-pound trucks	9'6"
3000-pound trucks (narrow aisle)	6'0"
4000-pound trucks	10'0"
6000-pound trucks	11'6"

Aisle widths for different load lengths should be determined on the basis that a variation of 8 inches in the load length will have a corresponding variation of 6 inches in the aisle width. For example, a 48-inch load length will increase the aisle widths indicated above by 6 inches.

ACCESSIBILITY OF FIREFIGHTING EQUIPMENT

Whenever possible, portable firefighting equipment should be placed along operating aisles in warehouses for easy accessibility. When firefighting devices, including water valves and hose outlets cannot be so placed, a 36-inch fire aisle must give access to them. NEVER obstruct

firefighting equipment. In all cases fire aisles should lead to the nearest working aisle.

CLEARANCE OF STACKS

The minimum clearance between stacks and automatic sprinkler deflectors should be 18 inches. When stack heights exceed 15 feet, a 36-inch clearance should be maintained. The horizontal clearance between the supplies and structural members of other installed devices should be 18 inches, when supplies are stacked above the horizontal level of lower roof truss members or beams. See figures 12-3 and 12-4.

Except as otherwise required for materials subject to excessive swelling, clearance between stacks and walls is not required in warehouses with exterior walls and standard fire walls. Warehouses with substandard fire walls (less than a 4-hour rating) require a 24-inch clearance. When hazardous materials are stored in general purpose buildings, clearance should be 24 inches.

Maintain an 18 inch clerance around the light or heating fixtures.

FIRE DOORS

Around the path of travel of fire doors, there should be a 24-inch clearance unless a barricade is provided in which case no clearance is required. Material should not be stored within 36 inches of fire wall openings.

MATERIALS HANDLING VEHICLES

Fork-lift trucks and industrial tractors should be operated only by duly authorized operators who are specially licensed for each particular type of vehicle. Never permit industrial vehicular equipment to be used for transporting personnel. No person other than the driver should be permitted to ride on any of the above vehicles unless a permanent seat is provided.

SAFETY IN CLEANING

Absolute cleanliness is the best weapon against many hazards. But see that your men

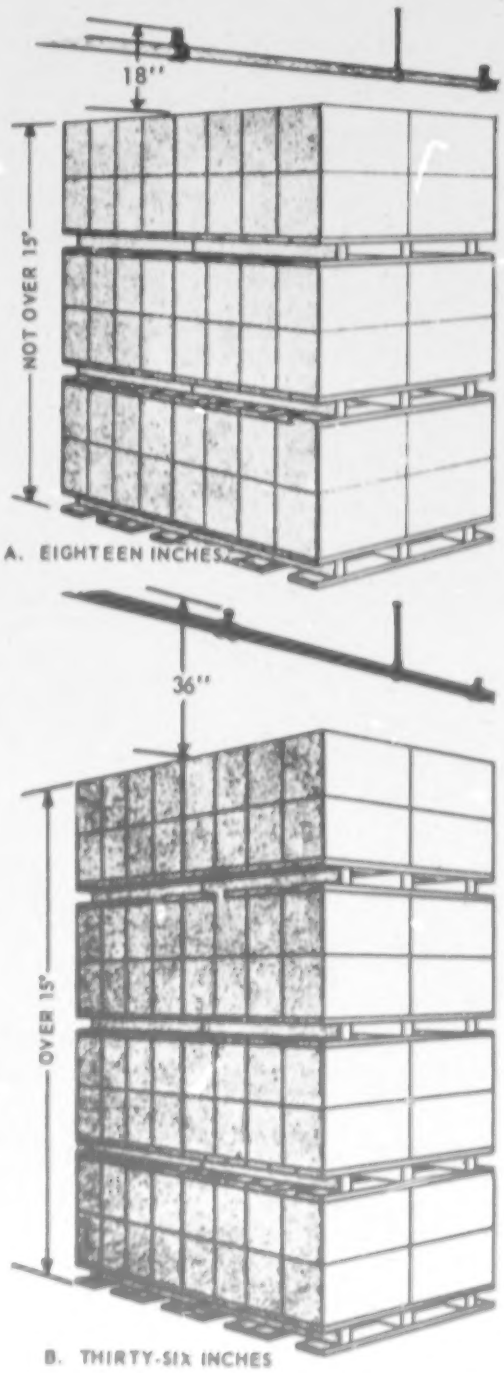

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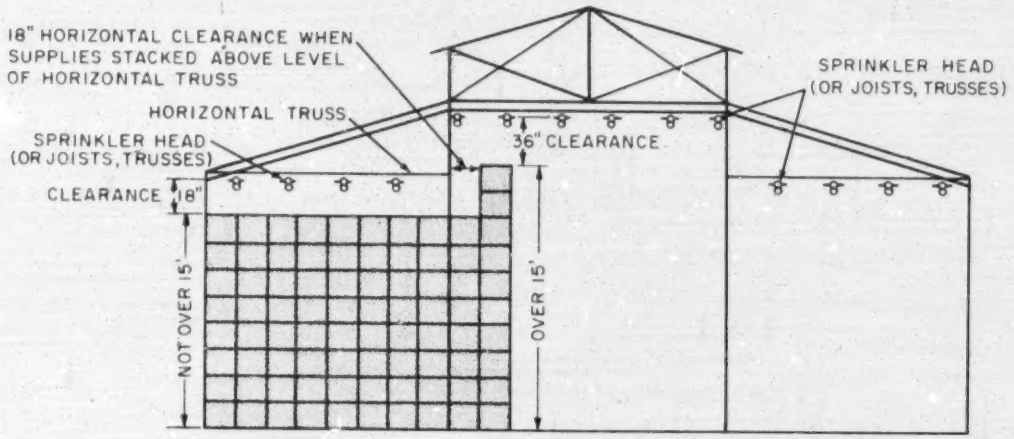
Figure 12-3.—Overhead stock clearance at sprinkler head.


18" HORIZONTAL CLEARANCE WHEN SUPPLIES STACKED ABOVE LEVEL OF HORIZONTAL TRUSS
HORIZONTAL TRUSS
SPRINKLER HEAD (OR JOISTS, TRUSSES)
CLEARANCE 18"
36" CLEARANCE
SPRINKLER HEAD (OR JOISTS, TRUSSES)
NOT OVER 15'
OVER 15'

90.25

Figure 12-4.—Clearance of material from sprinkler heads and trusses.

clean safely. When they wash the overheads and bulkheads with strong cleaners make sure the men wear goggles. Do not take a chance on cleaning agents damaging their eyesight. Use only approved cleaners and polishes.

Decks must be thoroughly dried after swabbing. Have WET DECK signs posted if the decks must be used before they are entirely dry.

FOOD SERVICE SAFETY PRECAUTIONS

Good common sense and alertness are needed when preparing food or cleaning up after a meal. This means that the galley is no place for dreamers. Here are some everyday rules to observe.

Handle hot dishes with special care. When men are carrying containers of scalding hot liquids, make sure they fasten the lids of the containers securely and to use special holders. They should always check the dial on the thermometer for the deep sink before putting their hands into the hot water, and they should protect their hands from hot utensils or hot appliances by using special holders.

Instruct the men to go easy in filling steam-jacketed kettles and serving dishes during rough weather. Containers should never be more than half full. Spashing may result from a full container, and someone is likely to be scalded.

Warn the galley crew of the dangers of steam and hot grease. Carelessness with these can result in extremely serious accidents.

See that the messmen look for cracks and sharp edges before they wash glassware and that they use a dust pan and brush to clean up broken glassware and crockery. Do not allow them to pick it up with their hands.

Get the men into the habit of cleaning up spilled foods and liquids immediately. A sloppy galley is a menace to health and safety.

Injuries have resulted from improper opening of cans and other containers. Instruct your men in correct procedure. Can openers are provided for use in the general mess. Cleavers and knives should not be used for opening cans. A clean can opener will facilitate opening.

USING SHARP INSTRUMENTS

Knives and other sharp instruments can be a constant menace unless they are properly used. Rule No. 1 is that knives must be held firmly. This can't be done if the knife handle is greasy and slippery. Have the handles cleaned with a wire brush to get grease out of the grain of the wood and from around the rivet heads.

A sharp knife is less dangerous than a dull one, because it does its work better. Use a water stone or a carborundum oil stone to sharpen

knives. If a power-driven emery stone is used for sharpening, the temper of the metal is apt to be damaged.

Knives are made in different shapes and sizes. Each size and each shape is especially designed for certain uses. Figure 12-5 shows three different kinds of knives.

The boning knife is used for removing bones from meat. The steak knife is designed for cutting steaks and roasts. The cook's knife is used for chopping vegetables, slicing fish, and similar purposes. It is not used for cutting meat. Although not illustrated, the paring knife is used in the vegetable preparation room for eyeing and sizing potatoes and peeling fresh onions. Knives are never used for cutting through bones. That's a job for the saw. Don't allow good knives to be used for cutting strings, [illegible], or sacks, nor should cleavers be used for cutting wire, opening cans, or driving nails.

Keep knives in a knife rack or by themselves in a drawer with a rack. Keep them all pointing one way with the cutting edge down. See that they are washed in hot water to destroy bacteria that may harbor in the seams where handles join the steel. Knives should be washed one at a time so that they do not soak in water. This practice will preclude the danger of getting cut by knife blades when reaching into a sink.

Whoever uses a knife should clean it and replace it in the proper rack. He should never place it on or in the sink for the messman. This practice is dangerous since the next person using the sink may cut himself. It will also ruin the handles.

Laying anything on top of knives is a dangerous practice.

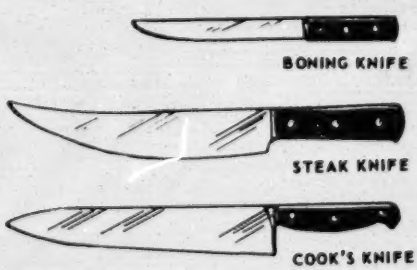


Figure 12-5.–Knives with a purpose.

If a knife or cleaver starts to fall, get out of the way. Don't try to catch it.

Always cut away from the body. Never "palm" vegetables or fruits and then attempt to cut them.

Meat should be thawed before cutting it by hand. However, when using the power saw, the meat should be completely frozen In its frozen state, meat is easier to handle and cut. There is less danger of injury as frozen meat is easier to guide through the saw blade.

Don't allow men to wear gloves when they are using the electrically-operated meat saw. First of all, it is unsanitary, and secondly, a glove may cause the hand to get caught in the machinery.

One more thing: accidents can be prevented by providing plenty of working space. Give your meat cutters as much space as possible. They need elbow room when using their knives in cutting and boning meat.

POWER EQUIPMENT

An inexperienced man should never handle power equipment. Be sure that your men know what they are doing. Machines should be properly adjusted before the power is turned on, and the guards should always be in place. Don't try to force power tools. Let the machines do the work. If repairs are needed, get a qualified man from the engineering department to make them. You're not expected to be a repair expert.

Actual demonstration on the operation of power equipment should be conducted during the instruction of meat cutters. During the demonstration, the following instructions should be given. Tell the meat cutters to be especially careful when they saw small pieces of meat and never to reach around the saw. They may get caught in it. Extra care is also necessary when frozen meat is cut. Dull saw blades are unsafe. Use sharp blades that have plenty of set. The set keeps the blade from binding and permits the saw to do a smooth, even job.

The meat grinder also requires special precautions. Be sure you have the proper size of plate for the job. Then tighten the plate by means of the handwheel. Don't tighten too much–the machine may bind. Never run the meat grinder dry. The plate will be gouged out and cut. Be

sure that all bones have been removed from the meat before it is put into the grinder. Always use a wooden plunger for feeding the meat into the machine, never your hand or knife. Caution your men against overloading the machine by forcing large pieces of meat into the grinder. This burns out the motor. Items such as bread and crackers may be ground in the meat and vegetable chopper. However, extreme caution must be taken to ensure that the machine is not overloaded.

When you use either the power [illegible] machines for slicing bread, watch you[illegible] Feed the bread into the knives with the [illegible] provided for that purpose and never with hands.

The most important thing to drill into the minds of your men is to be alert at all times when they use galley equipment. They should not have their minds on anything but their work. Nearly all accidents are caused by inattention. More information on galley equipment can be found in chapter two, of NAVSUP P-421.

WORKING AROUND ELECTRICITY

Electrical equipment must be handled with discretion. All electrical equipment should be grounded. Have all electrical equipment checked by the electrician for proper grounding. Water is a good conductor of electricity, so for the sake of safety, keep water away from electrical wire and connections. If a hose is used in any part of the gall[illegible]treme caution should be used to prevent water from splashing on electrical equipment.

Be sure attachments are properly connected before you turn on the switch. You may need to check with the Electrician's Mate, as to how many appliances you can safely use on one circuit. Check on the oiling and greasing of electrical equipment. Most electrical equipment requires very little lubrication, but that little is important.

DO NOT OVERLOAD GRINDERS AND MIXING BOWLS. Overloading can cause all kinds of trouble. Mixing bowls should be filled about one-half full. Incorrect speed adjustments can also cause trouble. Be sure your men understand the uses of the various speeds that are available on some machines.

Don't attempt to remove or repair fuses, and don't make any other repairs. Leave these jobs to an electrician.

When an electrically powered machine is in operation, have some one stationed with it. Don't leave it unattended. When you are through with the machine, turn off both the [illegible]ne switch and the main switch if possible. [illegible] and secure the machine thoroughly and [illegible]perly.

HELP PREVENT FIRES

Fire is the nightmare of a fighting ship. All hands should be warned about the dangers of a fire aboard ship.

The canopy over the steam jacketed kettle and ranges should be cleaned daily—especially when grilled meats are prepared. Flames that may reach the canopy from the range won't spread if there is no grease and dirt for them to feed on. Have exhaust fans and ducts over the ranges cleaned at least once a week—more often if necessary. Never allow grease to accumulate.

You should instruct your men that when a fire occurs in the galley spaces, they must sound an alarm immediately. When the alarm has been sounded, the next important step is to secure the blowers for the intake and exhaust system, to prevent the fire from spreading to other compartments. The men must know where the fire-fighting equipment is located, how it is operated, and the principles behind its operation.

CLASSIFICATION OF FIRES

There are four classifications of fires that you should be able to recognize which are:

- Class A—Fires involving wood, rubbish, and so forth.
- Class B—Fires involving oil, or oil soaked materials
- Class C—Fires involving electrical equipment
- Class D—Fires involving magnesium or titanium

BEST COPY AVAILABLE

CAUSE OF COMBUSTION

Three factors necessary for combusion are:

- Fuel
- Oxygen
- Sufficient heat to raise a combustible material to its ignition temperature

PRINCIPLES OF EXTINGUISHING FIRES

In order to extinguish a fire, one of three factors necessary for combustion must be eliminated:

- Starving–If the fuel is removed, the fire is extinguished by starving.
- Smothering–If the combustion supporting oxygen is removed, the fire is extinguished by smothering.
- Cooling–If heat is removed from a fire, the fire is extinguished by cooling.

FIRE EXTINGUISHERS

Never use water on either electrical equipment or a grease fire. Since water is a conductor of electricity, you run serious danger of electrical shock from training water on an electrical fire. Grease or oil floats on top of water, so turning a hose on a grease fire is more likely to expand the fire than to put it out.

Carbon dioxide extinguishers are used mainly for putting out electrical fires. They are best for this purpose since they do not damage the equipment. They are effective also when they are used on burning fuel oil, gasoline, alcohol, and paint. A dry chemical powder, pottasium bicarbonate, (Purple-K) FSN 9C 4210-752-9343, is now used for extinguishing fires in deep fat fryers. A foam-type extinguisher is another type used to put out grease or oil fires, expecially large ones.

CO_2 Extinguisher

Figure 12-6 shows the CO_2 extinguisher which is currently used aboard ship. This portable extinguisher holds 15 pounds of CO_2 by weight. It has a squeeze-grip-type release valve–you release the carbon dioxide by squeezing the release valve.

When CO_2 is released from the container, it expands rapidly to 450 times its stored volume. This rapid expansion causes the temperature to drop to -100°F. Most of the liquid carbon dioxide is vaporized to gas, but some of it forms "snow." Don't permit this snow to come in contact with your skin. It will produce painful blisters.

Be careful not to let yourself or someone else be suffocated in a "pocket" of CO_2. In high concentrations, CO_2 will produce asphyxiation. It will cause suffocation of a person as rapidly as it will smother a fire, unless proper precautions are taken.

The CO_2 extinguishers should be checked periodically by the fire department ashore, or the engineering department aboard ship.

Dry Chemicals

Dry chemical powders extinguish a fire by a rather complicated chemical mechanism. They do not smother the fire and they do not cool it. Instead, they interrupt the chemical reaction

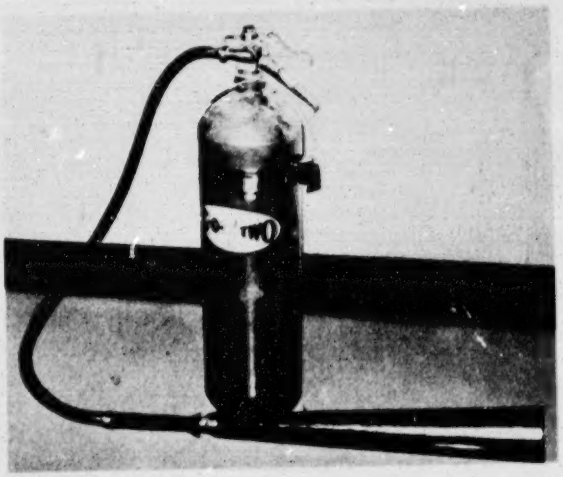


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Figure 12-6.–Portable CO_2 extinguisher with squeeze-grip type release valve.

that is fire by suspending fine particles in the fire. In effect, the dry chemicals put a temporary screen between the heat, oxygen, and fuel and maintain this screen just long enough for the fire to be extinguished.

Several types of dry chemicals have been used as fire extinguishing agents. For Navy use, the most important agent of this kind at present is potassium bicarbonate, also known as Purple-K-Powder or PKP. PKP is used for extinguishing class B and class C fires, primarily fires in deep fat fryers in the galley. It is very effective against these fires. However, it is both corrosive and abrasive and should be used on class C fires only in emergencies. PKP is primarily used in portable 20-pound extinguishers (see Figure 12-7). It can also be used in conjunction with light water. For more information on how to use PKP, consult the damage control division of your ship.

FIRST AID TRAINING

See that your men know how to treat burns—especially grease burns, how to give artificial respiration in case of electrical shock, and how to stop bleeding. You should have no trouble getting a member of the medical department to give lectures on these subjects. Also, they are discussed in *Standard First Aid*, NavPers 10081 (current edition).

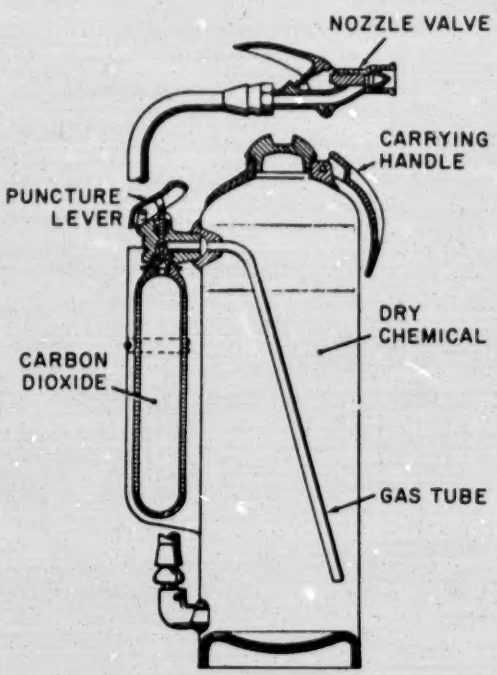

Figure 12-7.—Dry chemical extinguisher.

CHAPTER 13

LONG RANGE PATROL RATIONS

Hot inflight meals are a great boon to aviation personnel assigned to missions on large, long-range aircraft. The Foil Pack Meal is one such ration. If you are assigned to a naval air station, you are likely to participate in preparing these meals.

THE FOIL PACK MEAL

The Navy Foil Pack is an easy, heat-and-serve-type meal. It consists of three basic dinner components—meat, potatoe (or potato substitute), and vegetable—and several breakfast, bread, and dessert items, which are precooked, packaged separately in aluminum foil containers, sealed, and refrigerated. This part of the operation is carried out in the ground galley. As needed, these units are issued to aircraft, stowed in the plane galley refrigerator, and reheated in a specially designed oven at meal time. A 15 minute cooking cycle completes the meal, all components finishing at the same time. Other components—salads, breads, desserts, and beverages—are issued separately as prepared or unprepared bulk supplements.

ADVANTAGES

The Foil Pack Meal offers the combined advantage of a fresh, galley-prepared hot meal and a minimum of work in the aircraft galley. Neither special cooking techniques nor the time of busy aviation personnel are required to make it palatable. This is a quick, no-fuss, no-muss method. All that is required is serving onto paper plates, and assembling the other components. Disposable lap trays and accessories further simplify this service aloft.

Aloft open-fire cooking is eliminated—the hazards, attendant grease, odor, and waste problems are thus avoided.

There are advantages in ground galley preparations, too. They do not require special stocks of food supplies. Most items used are the same as those stocked for the general mess. Ordinary (38°–40°F) refrigerator temperatures keep the meal safely up to 3-1/2 days. Quantities can be made up ahead of time during slack periods and requests filled as needed.

LIMITATIONS

The limitations of the Foil Pack Meal are as follows:

- Expensive, especially designed equipment is needed on aircraft to complete the meal. Foil containers are relatively expensive and are not reusable.
- Commissarymen must be trained in principles and techniques of Foil Pack Meal preparation. Exactness and accuracy in measuring and weighing ingredients is essential to producing high-quality meals consistently.
- Rigid sanitation is required to minimize danger of food contamination. Since the Meals are precooked and not frozen at any stage in production, there is a high risk of food spoilage unless handled correctly. As a precautionary measure, the plane commander, pilot, and copilot should eat different menus or food combinations.

- Foil Pack Meals have to be supplemented with bulk issue items for complete meal service. Two consecutive Foil Pack Meals on one flight are monotonous, and aircrews often prefer alternating them with box lunches and bulk issues.

SPECIAL EQUIPMENT AND SUPPLIES REQUIRED

The ground and the aircraft flight galleys require special equipment and supplies to produce the Foil Pack Meal.

An ample stock of foil containers is needed. Two sizes of packages and lids are used in the Navy Foil Pack system; these are the 10 oz. containers used for meat and breakfast components, and the 5 oz. containers for potato (or substitute), vegetables, and other items. A hand crimper is used in closing the lid on the container. The Foil lid prevents spilling and air bubbles, and the container remains rigid enough to allow uniform cooking. Because each course of the meal is placed in a separate container, flavors are kept distinct.

A specially designed oven, (Food Service Operations D 19-32) is required in the aircraft galley. This oven is equipped with a thermostat, circuit-breaker switch, fan, timer, and removable rack for loading and unloading the foil packs.

An electric refrigerators, (F.S.O. D19-33) is a necessary piece of aircraft galley equipment. This appliance stows foil pack components as well as bulk issue items that accompany this and other meals.

Spices, condiments, salad oils, and dressings to make the meal components and salads more palatable and satisfying to individual tastes may also be issued by the flight galley with the foil pack. When unprepared bulk food items are issued with the Foil Pack Meals, additional preparation and service utensils are required.

MEAL PATTERNS AND MENUS

The pattern of foods used for the Foil Pack Meal is as follows:

Breakfast	Dinner/Supper
Fruit or juice	Soup or fruit juice
Cereal*	Meat or (meat substitute)
Meat	Potato or (potato substitute)
Egg(s) or potatoes	Vegetable
Bread or pastry	Salad
Sweets	Bread
Beverage **	Dessert
Milk	Beverage **
	Milk

Consumable accessory items (such as salt, pepper, sugar, dry cream, catsup, salad dressing, and mustard)

NOTE: * Optional items
** Cooked aloft

Three of the Dinner/Supper components—meats, potatoes, and vegetables are foil packed; bread and dessert items may be included, making excellent additions to the meal. Rolls that are heated and browned in aircraft ovens, and desserts such as hot pies are acceptable and highly desirable items. More often than not, however, breads and desserts are bulk issued along with the soup, salad, and beverages that are to be prepared aloft.

Breakfast meats and cereal items may or may not be packaged in the foil. Many of the items, such as ham slices, are simply grilled on hotplates and items such as oatmeal may be cooked in hotcups. Ready-to-serve cereals also simplify meal preparation and are often used in place of precooked foil pack items.

Menu balance is necessary in meals of this type, and crews need one regular hot ration daily on long flight missions. The Foil Pack Meal will supply that need adequately. Sample menus are found in F.S.O. D 10-34 and 35. Use these menus as a guide in planning hot meals for use

on long-range aircraft. Special orders and crew preferences are also valuable aids to menu planning. These crew preferences should be solicited periodically to assure that menus published by the flight galley include preferred food combinations of the flight crews. Acceptability questionnaires or food preference checkoff lists are the tools to aid the crew in recording their preferences.

Plan to include several printed menus with each outgoing order. A record of these menus is an extremely important means of eliminating duplication of Foil Pack Meal components from one mission to another. Menus will aid in assembling the meal aloft. When proposed operational schedules are prepared a month in advance, a planned monthly menu is possible.

HOW TO PRODUCE THE FOIL PACK MEAL

Hit-and-miss methods of production in the ground flight galley are strictly taboo in preparing Foil Pack Meals. The end products should be of excellent quality to avoid gross waste. Highly trained commissary personnel along with close supervision are essential in all stages of production. The meal can only be as good as supervision is adequate.

As in all food preparation, accurate weights and measures and good preparation techniques are necessary. Extreme care, however, is needed in producing the Foil Pack Meal in the ground flight galley. The following information is included to aid the cause of excellent food production.

RECIPES SUITABLE FOR FOIL PACK MEALS

Standardized recipes for 25-portion batches may be requested from the Commanding Officer, U.S. Navy Subsistence Office, Washington, D.C. 20374. Recipes have been separated and coded into sections in accordance with the Armed Forces Recipe Service as follows:

C. Breads	L. Poultry (including dressing)
E. Cereals	O. Sauces
H. Fish	Q. Vegetables (including potatoes)
J. Meat	

Foil Pack Meal dessert recipes have not been developed because of the usual practice of issuing these prepared items in bulk form from Navy bake shops. With the exception of custard-type pie fillings and pies with meringues or similar desserts, many baked items can be kept palatable and safe, if properly wrapped, without refrigeration for short periods during flights. Fruit pies, cookies, and iced cupcakes are examples of galley baked items that are popular and stow well.

Foods are fully cooked before packaging in the foil container, and, to prevent overcooking when reheated, the cooking times indicated on the recipes must be carefully observed. This timing allows for reheating in a 15-minute cooking cycle at 400°F in the aircraft oven, which permits all components te be completed at the same time. Use the Foil Pack Meal recipes and recipe variations, as printed, to obtain the best crew acceptability of the meal.

PRODUCTION STEPS IN THE GROUND GALLEY

1. Each component is prepared, weighed out, and separately packed in aluminum containers. (F.S.O. D 19-37)
2. Seasoning and/or liquid is added; see step 2.
3. Lids are placed on the containers and sealed with a hand crimper; see step 3.
4. Each component is labeled to identify it as to contents and date of pack; then print using a china marking pencil, felt tip pen, or blunt pencil; see step 4.
5. Transport the filled and sealed containers to the refrigerator immediately after marking.

6. Maintain a consistent 36°-40°F temperature to ensure safekeeping of the components until needed.

PRODUCTION STEPS IN THE AIRCRAFT GALLEY

1. When requested by a squadron, foil packs are carried to the plane and refrigerated immediately.
2. As needed, the different meal components are loaded onto the oven rack. (F.S.O. D 19-32)
3. The oven, which has been preheated to 400°F, is set for a 15 minute cooking cycle.
4. The menu components are placed in the lap tray or emptied onto paper plates, and other items such as salads and beverages are assembled as shown in (F.S.O. D 19-30).
5. A meal is served to four crew members at one time.

FOODS TO EXCLUDE FROM SPECIAL MEALS

When preparing foil pack and other special meals you should avoid using certain food in menus to prevent discomfort to aircrews. Foods that are known to cause intenstinal gas expansion at high altitudes are:

- Beans (dried or canned, such as navy or pinto),
- Onions (raw),
- Cabbage (all forms),
- Carbonated beverages

Airsickness from plane motion, fatigue, or lack of oxygen may also cause distress. Starch, sugar, and liquid foods included in the meal may be helpful in such cases.

Foodborne infections are always a threat to in-flight feeding operations. You must always maintain proper sanitation in the ground galley and closely observe food handling regulations. Deterioration and spoilage occur more rapidly in cooked food mixtures such as the following:

- Sandwiches made of ground meats or salad-type fillings,
- Egg-salad mixtures (with mayonnaise or salad dressing),
- Fish and shellfish,
- Pies made of custards and similar fillings,
- Creamed sauces or soups,
- Leftover cooked poultry.

These and other fresh foods are highly perishable and spoil if there is a lag in time between the preparation and consumption. Holding times and temperatures, especially for all protein foods, must be adhered to rigidly. The Bureau of Medicine and Surgery has ruled that not more than three hours cumulative time should elapse between preparation and consumption of flight rations. Food items should be refrigerated below 40°F or heated above 140°F. You should beware of leftovers from the general mess, and never use foods that have been out of refrigeration for long periods of time. Survey of food items often becomes necessary when flights are canceled or delayed takeoffs occur.

APPENDIX I

RECIPE CONVERSION TABLES

There are three sets of conversion tables titled: Decimal Fractions of Pounds/ Decimal Fractions of Gallons; Decimal Fractions of Quarts/Decimal Fractions of Pints; and Decimal Fractions of Cups/Decimal Fractions of Tablespoons.

Here is how to use one of the three sets of Conversion Tables (Decimal Fractions of Pounds/ Decimal Fractions of Gallons). You are to prepare 330 portions of OYSTER STEW, Armed Forces Recipe P21. The Working Factor (See Armed Forces Recipe Card A1) is 3.30. After computing the Working Factor you multiply the weight or measure of each item in the recipe by 3.30, and use the table to convert fractions of pounds to ounces.

Oysters 18 lb (100 portions, P21) x 3.30 W. F. = 59.40 lb

To convert .40 lb to ounces find .40 in the conversion table column titled DECIMAL and then look to the column titled OUNCES and you will see 6 1/2. So, 59 lb 6 1/2 ounces oysters is needed.

POUNDS OUNCES	DECIMAL	QUARTS	PINTS
6-1/2	.40	1	1
6-1/2	.41	1	1
6-3/4	.42	1	1
7	.43	1	1
7	.44	1	1
7-1/4	.45	1	1
7-1/4	.46	1	1

Milk, Nonfat, dry 3 lb 4 oz (3.25 lbs) (100 portions P21) x 3.30 W. F. = 10.725 lb

To convert .725 lb to ounces find .72 in the DECIMAL column and you will see 11 1/2 ounces. So, 10 lb 11 1/2 oz nonfat dry milk is needed.

POUNDS OUNCES	DECIMAL	QUARTS	PINTS
11-1/4	.70	2	1
11-1/4	.71	2	1
11-1/2	.72	2	1
11-3/4	.73	2	1
11-3/4	.74	2	1
12	.75	3	-

Water, warm 3 1/2 gal (3.5 gal) (100 portions P21) x 3.30 W. F. = 11.55 gal

Find the DECIMAL .55, follow across to the right and you will see 2 qt, 1/2 cup, 4 tbsp, 2 1/2 tsp, so, 11 gal, 2 qt, 1/2 cup, 4 tbsp, 2 1/2 tsp warm water will be needed.

POUNDS OUNCES	DECIMAL	GALLONS QUARTS	PINTS	CUPS	TABLESPOONS	TEASPOONS
8	.50	2	-	-	-	-
8-1/4	.51	2	-	-	2	1-3/4
8-1/4	.52	2	-	-	5	1/4
8-1/2	.53	2	-	-	7	2
8-3/4	.54	2	-	1/2	2	3/4
8-3/4	.55	2	-	1/2	4	2-1/2
9	.56	2	-	1/2	7	1
9	.57	2	-	1	1	1-3/4

Table 1.—Decimal Fractions of Pounds/Decimal Fractions of Gallons.

Pounds	Gallons					
Ounces	Decimal	Quarts	Pints	Cups	Tablespoons	Teaspoons
1/4	.01	-	-	-	2	1-3/4
1/4	.02	-	-	-	5	1/4
1/2	.03	-	-	-	7	2
3/4	.04	-	-	1/2	2	3/4
3/4	.05	-	-	1/2	4	2-1/2
1	.06	-	-	1/2	7	1
1	.07	-	-	1	1	2-3/4
1-1/4	.08	-	-	1	4	1-1/2
1-1/2	.09	-	-	1	7	-
1-1/2	.10	-	-	1-1/2	1	1-3/4
1-3/4	.11	-	-	1-1/2	4	1/2
2	.12	-	-	1-1/2	6	2-1/4
2	.13	-	1	-	1	3/4
2-1/4	.14	-	1	-	3	2-1/2
2-1/2	.15	-	1	-	6	1-1/4
2-1/4	.16	-	1	1/2	1	-
2-3/4	.17	-	1	1/2	3	1-1/2
3	.18	-	1	1/2	6	1/4
3	.19	-	1	1	-	2
3-1/4	.20	-	1	1	3	1/2
3-1/4	.21	-	1	1	5	2-1/4
3-1/2	.22	-	1	1-1/2	-	1
3-3/4	.23	-	1	1-1/2	2	2-3/4
3-3/4	.24	-	1	1-1/2	5	1-1/4
4	.25	1	-	-	-	-
4-1/4	.26	1	-	-	2	1-3/4
4-1/4	.27	1	-	-	5	1/4
4-1/2	.28	1	-	-	7	2
4-3/4	.29	1	-	1/2	2	3/4
4-3/4	.30	1	-	1/2	4	2-1/2
5	.31	1	-	1/2	7	1
5	.32	1	-	1	1	2-3/4
5-1/4	.33	1	-	1	4	1-1/2

Table 1.—Decimal Fractions of Pounds/Decimal Fractions of Gallons—Continued.

Pounds	Gallons					
Ounces	Decimal	Quarts	Pints	Cups	Tablespoons	Teaspoons
5-1/2	.34	1	-	1	7	-
5-1/2	.35	1	-	1-1/2	1	1-3/4
5-3/4	.36	1	-	1-1/2	4	1/2
6	.37	1	-	1-1/2	6	2-1/4
6	.38	1	1	-	1	3/4
6-1/4	.39	1	1	-	3	2-1/2
6-1/2	.40	1	1	-	6	1-1/4
6-1/2	.41	1	1	1/2	1	-
6-3/4	.42	1	1	1/2	3	1-1/2
7	.43	1	1	1/2	6	1/4
7	.44	1	1	1	-	2
7-1/4	.45	1	1	1	3	1/2
7-1/4	.46	1	1	1	5	2-1/4
7-1/2	.47	1	1	1-1/2	-	1
7-3/4	.48	1	1	1-1/2	2	2-3/4
7-3/4	.49	1	1	1-1/2	5	1-1/4
8	.50	2	-	-	-	-
8-1/4	.51	2	-	-	2	1-3/4
8-1/4	.52	2	-	-	5	1/4
8-1/2	.53	2	-	-	7	2
8-3/4	.54	2	-	1/2	2	3/4
8-3/4	.55	2	-	1/2	4	2-1/2
9	.56	2	-	1/2	7	1
9	.57	2	-	1	1	1-3/4
9-1/4	.58	2	-	1	4	1-1/2
9-1/2	.59	2	-	1	7	-
9-1/2	.60	2	-	1-1/2	1	1-3/4
9-3/4	.61	2	-	1-1/2	4	1/2
10	.62	2	-	1-1/2	6	2-1/4
10	.63	2	1	-	1	3/4
10-1/4	.64	2	1	-	3	2-1/2
10-1/2	.65	2	1	-	6	1-1/4
10-1/2	.66	2	1	1/2	1	-

Table 1.—Decimal Fractions of Pounds/Decimal Fractions of Gallons—Continued.

Pounds	Gallons					
Ounces	Decimal	Quarts	Pints	Cups	Tablespoons	Teaspoons
10-3/4	.67	2	1	1/2	3	1-1/2
11	.68	2	1	1/2	6	1/4
11	.69	2	1	1	-	2
11-1/4	.70	2	1	1	3	1/2
11-1/4	.71	2	1	1	5	2-1/4
11-1/2	.72	2	1	1-1/2	-	1
11-3/4	.73	2	1	1-1/2	2	2-3/4
11-3/4	.74	2	1	1-1/2	5	1-1/4
12	.75	3	-	-	-	-
12-1/4	.76	3	-	-	2	1-3/4
12-1/4	.77	3	-	-	5	1-1/4
12-1/2	.78	3	-	-	7	2
12-3/4	.79	3	-	1/2	2	3/4
12-3/4	.80	3	-	1/2	4	2-1/2
13	.81	3	-	1/2	7	1
13	.82	3	-	1	1	2-3/4
13-1/4	.83	3	-	1	4	1-1/2
13-1/2	.84	3	-	1	7	-
13-1/2	.85	3	-	1-1/2	1	1-3/4
13-3/4	.86	3	-	1-1/2	4	1/2
14	.87	3	-	1-1/2	6	2-1/4
14	.88	3	1	-	1	3/4
14-1/4	.89	3	1	-	3	2-1/2
14-1/2	.90	3	1	-	6	1-1/4
14-1/2	.91	3	1	1/2	1	-
14-3/4	.92	3	1	1/2	3	1-1/2
15	.93	3	1	1/2	6	1/4
15	.94	3	1	1	-	2
15-1/4	.95	3	1	1	3	1/2
15-1/4	.96	3	1	1	5	2-1/4
15-1/2	.97	3	1	1-1/2	-	1
15-3/4	.98	3	1	1-1/2	2	2-3/4
15-3/4	.99	3	1	1-1/2	5	1-1/4

Table 2.—Decimal Fractions of Quarts/Decimal Fractions of Pints.

Quarts				Decimal	Pints		
Pints	Cups	Tablespoons	Teaspoons		Cups	Tablespoons	Teaspoons
-	-	-	2	.01	-	-	1
-	-	1	3/4	.02	-	-	2
-	-	1	2-3/4	.03	-	1	-
-	-	2	1-3/4	.04	-	1	3/4
-	-	3	1/2	.05	-	1	1-3/4
-	-	3	2-1/2	.06	-	1	2-3/4
-	-	4	1-1/2	.07	-	2	3/4
-	-	5	1/4	.08	-	2	1-3/4
-	-	5	2-1/4	.09	-	2	2-3/4
-	-	6	1-1/4	.10	-	3	1/2
-	-	7	-	.11	-	3	1-1/2
-	-	7	2	.12	-	3	2-1/2
-	1/2	-	1	.13	-	4	1/2
-	1/2	1	-	.14	-	4	1-1/2
-	1/2	1	1-3/4	.15	-	4	2-1/2
-	1/2	2	3/4	.16	-	5	1/4
-	1/2	2	2-3/4	.17	-	5	1-1/4
-	1/2	3	1-1/2	.18	-	5	2-1/4
-	1/2	4	1/2	.19	-	6	1/4
-	1/2	4	2-1/2	.20	-	6	1-1/4
-	1/2	5	1-1/4	.21	-	6	2-1/4
-	1/2	6	1/4	.22	-	7	-
-	1/2	6	2-1/4	.23	-	7	1
-	1/2	7	1	.24	-	7	2
-	1	-	-	.25	1/2	-	-
-	1	-	2	.26	1/2	-	1
-	1	1	3/4	.27	1/2	-	2
-	1	1	2-3/4	.28	1/2	1	-
-	1	2	1-3/4	.29	1/2	1	3/4
-	1	3	1/2	.30	1/2	1	1-3/4
-	1	3	2-1/2	.31	1/2	1	2-3/4
-	1	4	1-1/2	.32	1/2	2	3/4
-	1	5	1/4	.33	1/2	2	1-3/4

Table 2.—Decimal Fractions of Quarts/Decimal Fractions of Pints—Continued.

Quarts				Decimal	Pints		
Pints	Cups	Tablespoons	Teaspoons		Cups	Tablespoons	Teaspoons
-	1	5	2-1/4	.34	1/2	2	2-3/4
-	1	6	1-1/4	.35	1/2	3	1/2
-	1	7	-	.36	1/2	3	1-1/2
-	1	7	2	.37	1/2	3	2-1/2
-	1-1/2	-	1	.38	1/2	4	1/2
-	1-1/2	1	-	.39	1/2	4	1-1/2
-	1-1/2	1	1-3/4	.40	1/2	4	2-1/2
-	1-1/2	2	3/4	.41	1/2	5	1/4
-	1-1/2	2	2-3/4	.42	1/2	5	1-1/4
-	1-1/2	3	1-1/2	.43	1/2	5	2-1/4
-	1-1/2	4	1/2	.44	1/2	6	1/4
-	1-1/2	4	2-1/2	.45	1/2	6	1-1/4
-	1-1/2	5	1-1/4	.46	1/2	6	2-1/4
-	1-1/2	6	1/4	.47	1/2	7	-
-	1-1/2	6	2-1/4	.48	1/2	7	1
-	1-1/2	7	1	.49	1/2	7	2
1	-	-	-	.50	1	-	-
1	-	-	2	.51	1	-	1
1	-	1	3/4	.52	1	-	2
1	-	1	2-3/4	.53	1	1	-
1	-	2	1-3/4	.54	1	1	3/4
1	-	3	1/2	.55	1	1	1-3/4
1	-	3	2-1/2	.56	1	1	2-3/4
1	-	4	1-1/2	.57	1	2	3/4
1	-	5	1/4	.58	1	2	1-3/4
1	-	5	2-1/4	.59	1	2	2-3/4
1	-	6	1-1/4	.60	1	3	1/2
1	-	7	-	.61	1	3	1-1/2
1	-	7	2	.62	1	3	2-1/2
1	1/2	-	1	.63	1	4	1/2
1	1/2	1	-	.64	1	4	1-1/2
1	1/2	1	1-3/4	.65	1	4	2-1/2
1	1/2	2	3/4	.66	1	5	1/4

Table 2.—Decimal Fractions of Quarts/Decimal Fractions of Pints—Continued.

Quarts				Decimal	Pints		
Pints	Cups	Tablespoons	Teaspoons		Cups	Tablespoons	Teaspoons
1	1/2	2	2-3/4	.67	1	5	1-1/4
1	1/2	3	1-1/2	.68	1	5	2-1/4
1	1/2	4	1/2	.69	1	6	1/4
1	1/2	4	2-1/2	.70	1	6	1-1/4
1	1/2	5	1-1/4	.71	1	6	2-1/4
1	1/2	6	1/4	.72	1	7	-
1	1/2	6	2-1/4	.73	1	7	1
1	1/2	7	1	.74	1	7	2
1	1	-	-	.74	1-1/2	-	-
1	1	-	2	.76	1-1/2	-	1
1	1	1	3/4	.77	1-1/2	-	2
1	1	1	2-3/4	.78	1-1/2	1	-
1	1	2	1-3/4	.79	1-1/2	1	3/4
1	1	3	1/2	.80	1-1/2	1	1-3/4
1	1	3	2-1/2	.81	1-1/2	1	2-3/4
1	1	4	1-1/2	.82	1-1/2	2	3/4
1	1	5	1/4	.83	1-1/2	2	1-3/4
1	1	5	2-1/4	.84	1-1/2	2	2-3/4
1	1	6	1-1/4	.85	1-1/2	3	1/2
1	1	7	-	.86	1-1/2	3	1-1/2
1	1	7	2	.87	1-1/2	3	2-1/2
1	1-1/2	-	1	.88	1-1/2	4	1/2
1	1-1/2	1	-	.89	1-1/2	4	1-1/2
1	1-1/2	1	1-3/4	.90	1-1/2	4	2-1/2
1	1-1/2	2	3/4	.91	1-1/2	5	1/4
1	1-1/2	2	2-3/4	.92	1-1/2	5	1-1/4
1	1-1/2	3	1-1/2	.93	1-1/2	5	2-1/4
1	1-1/2	4	1/2	.94	1-1/2	6	1/4
1	1-1/2	4	2-1/2	.95	1-1/2	6	1-1/4
1	1-1/2	5	1-1/4	.96	1-1/2	6	2-1/4
1	1-1/2	6	1/4	.97	1-1/2	7	-
1	1-1/2	6	2-1/4	.98	1-1/2	7	1
1	1-1/2	7	1	.99	1-1/2	7	2

Table 3.—Decimal Fractions of Cups/Decimal Fractions of Tablespoons.

Cups	Tablespoons	Teaspoons	Decimal	Tablespoons
Cups				Teaspoons
-	-	1/2	.01	0
-	-	1	.02	0
-	-	1-1/2	.03	0
-	-	2	.04	0
-	-	2-1/2	.05	1/4
-	1	-	.06	1/4
-	1	1/4	.07	1/4
-	1	3/4	.08	1/4
-	1	1-1/4	.09	1/4
-	1	1-3/4	.10	1/4
-	1	2-1/4	.11	1/4
-	1	2-3/4	.12	1/4
-	2	1/4	.13	1/2
-	2	3/4	.14	1/2
-	2	1 1/2	.15	1/2
-	2	1-3/4	.16	1/2
-	2	2-1/4	.17	1/2
-	2	2-3/4	.18	1/2
-	3	-	.19	1/2
-	3	1/2	.20	1/2
-	3	1	.21	3/4
-	3	1-1/2	.22	3/4
-	3	2	.23	3/4
-	3	2-1/2	.24	3/4
-	4	-	.25	3/4
-	4	1/2	.26	3/4
-	4	1	.27	3/4
-	4	1-1/2	.28	3/4
-	4	2	.29	3/4
-	4	2-1/2	.30	1
-	5	-	.31	1
-	5	1/4	.32	1
-	5	3/4	.33	1

Table 3.—Decimal Fractions of Cups/Decimal Fractions of Tablespoons—Continued.

Cups	Tablespoons	Teaspoons	Decimal	Tablespoons
Cups				Teaspoons
-	5	1-1/4	.34	1
-	5	1-3/4	.35	1
-	5	2-1/4	.36	1
-	5	2-3/4	.37	1
-	6	1/4	.38	1-1/4
-	6	3/4	.39	1-1/4
-	6	1-1/4	.40	1-1/4
-	6	1-3/4	.41	1-1/4
-	6	2-1/4	.42	1-1/4
-	6	2-3/4	.43	1-1/4
-	7	-	.44	1-1/4
-	7	1/2	.45	1-1/4
-	7	1	.46	1-1/2
-	7	1-1/2	.47	1-1/2
-	7	2	.48	1-1/2
-	7	2-1/2	.49	1-1/2
1/2	-	-	.50	1-1/2
1/2	-	1/2	.51	1-1/2
1/2	-	1	.52	1-1/2
1/2	-	1-1/2	.53	1-1/2
1/2	-	2	.54	1-1/2
1/2	-	2-1/2	.55	1-3/4
1/2	1	-	.56	1-3/4
1/2	1	1/4	.57	1-3/4
1/2	1	3/4	.58	1-3/4
1/2	1	1-1/4	.59	1-3/4
1/2	1	1-3/4	.60	1-3/4
1/2	1	2-1/4	.61	1-3/4
1/2	1	2-3/4	.62	1-3/4
1/2	2	1/4	.63	2
1/2	2	3/4	.64	2
1/2	2	1-1/4	.65	2
1/2	2	1-3/4	.66	2

Table 3.—Decimal Fractions of Cups/Decimal Fractions of Tablespoons—Continued.

Cups	Tablespoons	Teaspoons	Decimal	Tablespoons
Cups				Teaspoons
1/2	2	2-1/4	.67	2
1/2	2	2-3/4	.68	2
1/2	3	-	.69	2
1/2	3	1/2	.70	2
1/2	3	1	.71	2-1/4
1/2	3	1-1/2	.72	2-1/4
1/2	3	2	.73	2-1/4
1/2	3	2-1/2	.74	2-1/4
1/2	4	-	.75	2-1/4
1/2	4	1/2	.76	2-1/4
1/2	4	1	.77	2-1/4
1/2	4	1-1/2	.78	2-1/4
1/2	4	2	.79	2-1/4
1/2	4	2-1/2	.80	2-1/2
1/2	5	-	.81	2-1/2
1/2	5	1/4	.82	2-1/2
1/2	5	3/4	.83	2-1/2
1/2	5	1-1/4	.84	2-1/2
1/2	5	1-3/4	.85	2-1/2
1/2	5	2-1/4	.86	2-1/2
1/2	5	2-3/4	.87	2-1/2
1/2	6	1/4	.88	2-3/4
1/2	6	3/4	.89	2-3/4
1/2	6	1-1/4	.90	2-3/4
1/2	6	1-3/4	.91	2-3/4
1/2	6	2-1/4	.92	2-3/4
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